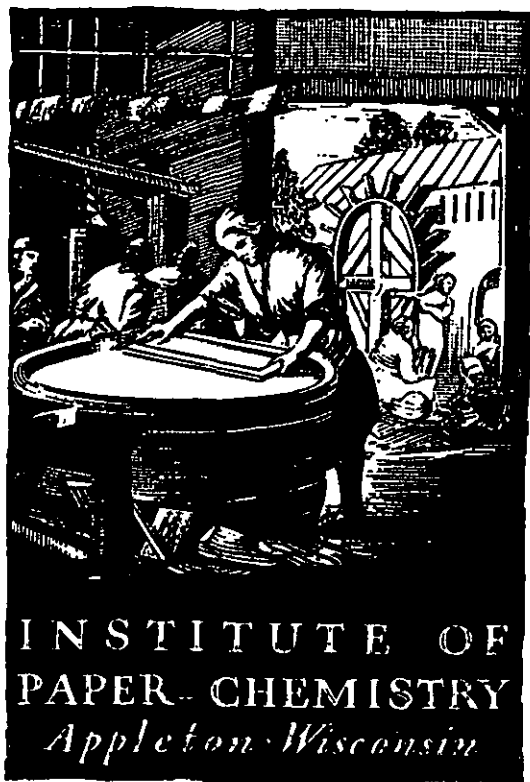


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CONTINUOUS BASELINE STUDY

✓ Project 1108-B

Progress Report 18
to
FOURDRINIER KRAFT BOARD INSTITUTE

January 1, 1949

THE INSTITUTE OF PAPER CHEMISTRY

APPLETON, WISCONSIN

CONTINUOUS BASELINE STUDY

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THE INSTITUTE OF PAPER CHEMISTRY
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In conjunction with the F.K.I. Continuous Baseline Study, eighty-four different sample lots of 42-lb. Fourdrinier kraft linerboard were submitted by ten different F.K.I. mills to The Institute of Paper Chemistry for testing during the period December 1 through December 31. In addition to the 42-lb. kraft linerboard, three samples of special drum stock were also submitted for evaluation by one of the participating mills. The results on the special stock are tabulated separately in this report. A tabulation of the number of samples classified according to mill may be seen in Table I.

TABLE I
DISTRIBUTION OF 42-LB. LINERBOARD SAMPLES

| Mill Code | Samples Submitted |
|-----------|-------------------|
| A | 6 |
| B | 13 |
| C | 6 |
| D | 15 |
| E | 2 |
| F | 11 |
| G | 8 |
| H | 8 |
| I | 7 |
| J | 8 |
| | <u>84</u> |

The above sample lots were tested for basis weight, caliper, bursting strength, G. E. puncture, and Elmendorf tear. A comparison of

the average strength results for each mill may be seen in Table II and graphically presented in Figures 1 to 6, inclusive. In addition to a comparison of the mill averages, Table II also shows the cumulative F.K.I. averages and the F.K.I. indexes. The cumulative F.K.I. averages include all the results up to but not including the current period; the current period in the case of this report is December 1 through December 31. The F.K.I. index is obtained as follows:

$$\frac{\text{current F.K.I. average}}{\text{cumulative F.K.I. average}} \times 100 = \text{F.K.I. index (\%)}$$

The F.K.I. index provides a ready means of comparing the current quality with previous results. For example, the current F.K.I. average basis weight is 43.5 lb., whereas the cumulative F.K.I. average basis weight is 43.1. Hence, the index for basis weight determined in per cent as indicated above is 100.9%. This signifies that the current average basis weight is higher than the cumulative average, which in this case covered the period from July 25, 1947 through November 30, 1948.

A comparison of the results in Table II and Figure I shows that the average basis weight for all mills submitting samples is above the 42-lb. specification set forth in Rule 41. Mill E has the highest average basis weight, it being 44.8 lb. or approximately 6.7% higher than the 42-lb. specification. On the other hand, Mills C and H have the lowest average basis weight, it being 42.8 lb. or approximately 1.9% higher than the 42-lb. specification.

The amount by which the mills exceed the 42-lb. specification is as follows:

| Mill Code | Per cent |
|-----------|----------|
| A | 2.9 |
| B | 3.8 |
| C | 1.9 |
| D | 2.9 |
| E | 6.7 |
| F | 4.5 |
| G | 2.6 |
| H | 1.9 |
| I | 6.2 |
| J | 2.6 |

A comparison of the average basis weight data for the previous period with the current F.K.I. average indicates that the basis weight is somewhat higher.

A comparison of the average calipers for the various mills (see Figure 2) shows that the mill averages vary from a low of 13.8 for Mill E to a high of 15.6 for Mill F, the average being 14.8 which is slightly lower than the cumulative average of 15.0.

The average bursting strength values obtained for each mill are graphically shown in Figure 3. It may be observed that the average bursting strength for the various mills ranges from a low of 97 for Mill F to a high of 111 for Mill E. The current F.K.I. average bursting strength is 104, slightly higher than the cumulative average of 103.

The data of Table II and Figure 4 show that the average G. E. puncture for all mills is 36 units. It may be noted that Mill F has the highest G. E. puncture value and Mill J the lowest. In connection with Mill J, it may be recalled that this mill had the lowest G. E. puncture during the last period. Further, the current F.K.I. average for G. E. puncture is lower than the cumulative F.K.I. average.

A graphic comparison of the Elmendorf tear results for the various mills is given in Figures 5 and 6. The data of Table II show that Mill H has the highest average machine direction tear value, while Mill J has the lowest. Similarly, Mill I has the highest average across-machine direction tear value while Mill J has the lowest. It may be noted that the current F.K.I. average machine direction and across-machine direction tear results are lower than the cumulative averages.

A comparison of the F.K.I. indexes indicates that, for the current period, the test averages for caliper, G. E. puncture, machine and across-machine direction Elmendorf tear are lower than the respective cumulative averages while the test averages for bursting strength and basis weight are higher than the cumulative averages.

In order to compare the variation within a given mill, the test results for each particular mill have been tabulated in Tables III to XIII for Mills A to J, respectively. In addition to the current averages, cumulative averages for each mill, together with the mill factor and mill index, are given for each mill. The cumulative mill average is the average test results obtained on the samples submitted by the particular mill

up to, but not including, the current averages. The mill factor and the mill index are obtained as follows:

$$\frac{\text{current mill average}}{\text{cumulative mill average}} \times 100 = \text{mill factor } (\%)$$

$$\frac{\text{current mill average}}{\text{cumulative F.K.I. average}} \times 100 = \text{mill index } (\%)$$

The mill factor and the mill index serve as a ready means for comparing the current mill results either with the previous result for that particular mill or with the cumulative F.K.I. results. As more samples are included and as the test data accumulate, the factors and indexes will have added significance. Since December, 1947, the reports have contained a comparison of the test data obtained at the mills with test data obtained at The Institute of Paper Chemistry.

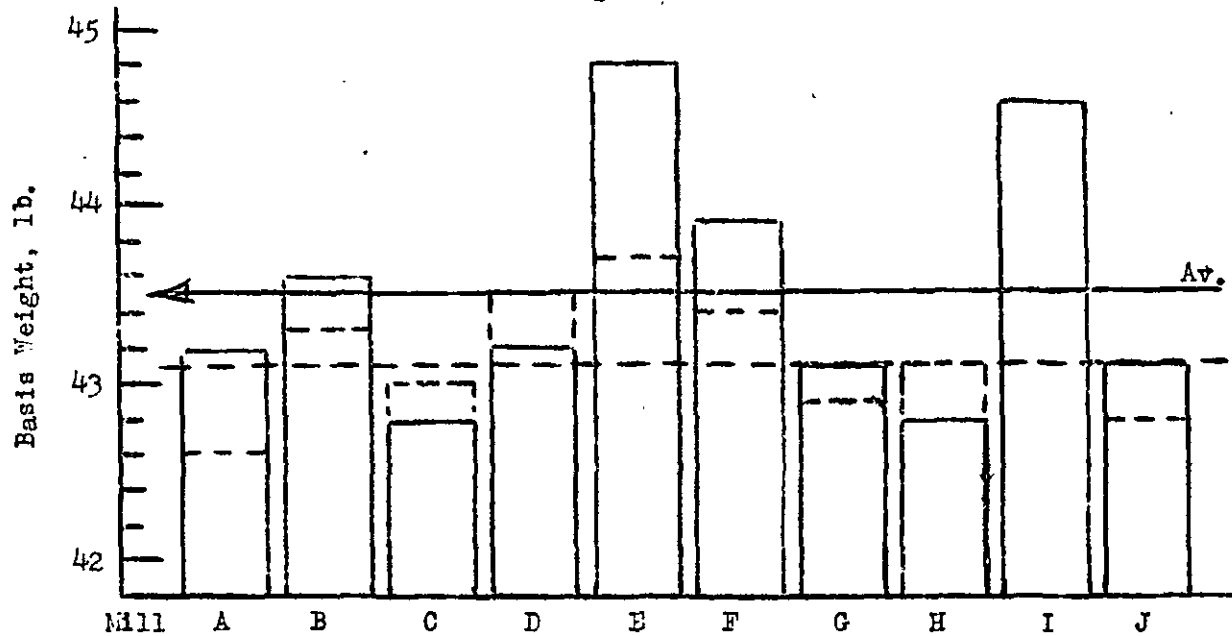
The results obtained on the special drum stock may be seen in Table XIII.

TABLE II

SUMMARY OF COMPOSITE MILL AVERAGES--DECEMBER 1 THROUGH DECEMBER 31, 1948

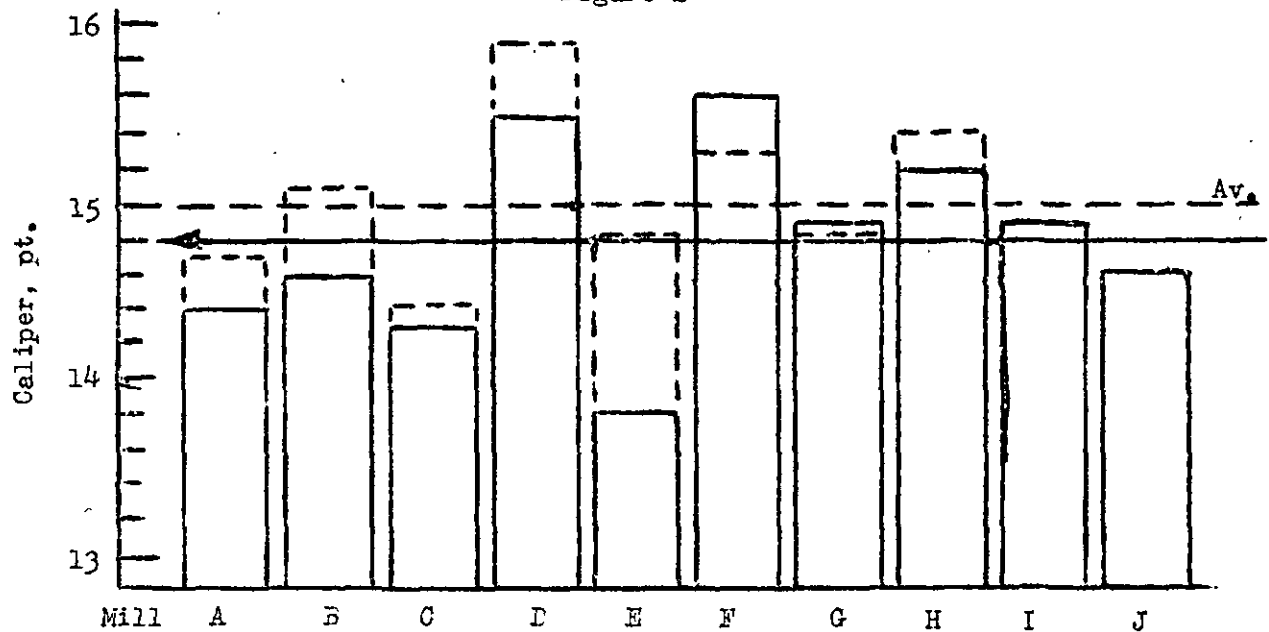
| Code No. | Basis Weight, lb. | Caliper, points | JUMBO Mullen Burst, points | G E. Puncture, units | Elmendorf Tear, g./sheet | In Direction Across Direction |
|-------------------------|-------------------|-----------------|----------------------------|----------------------|--------------------------|-------------------------------|
| A | 43.2 | 14.4 | 106 | 36 | 385 | 417 |
| B | 43.6 | 14.6 | 107 | 35 | 360 | 394 |
| C | 42.8 | 14.3 | 101 | 37 | 360 | 413 |
| D | 43.2 | 15.5 | 100 | 35 | 382 | 408 |
| E | 44.8 | 13.8 | 111 | 34 | 387 | 418 |
| F | 43.9 | 15.6 | 97 | 39 | 384 | 421 |
| G | 43.1 | 14.9 | 108 | 37 | 377 | 410 |
| H | 42.8 | 15.2 | 104 | 37 | 391 | 415 |
| I | 44.6 | 14.9 | 105 | 38 | 372 | 437 |
| J | 43.1 | 14.6 | 104 | 32 | 339 | 380 |
| Current FKI Average: | 43.5 | 14.8 | 104 | 36 | 374 | 411 |
| Cumulative FKI Average: | 43.1 | 15.0 | 103 | 38 | 383 | 415 |
| FKI Index, %: | 100.9 | 98.7 | 101.0 | 94.7 | 97.7 | 99.0 |

Figure 1



COMPARISON OF BASIS WEIGHT RESULTS
(Period Dec. 1 - Dec. 31)

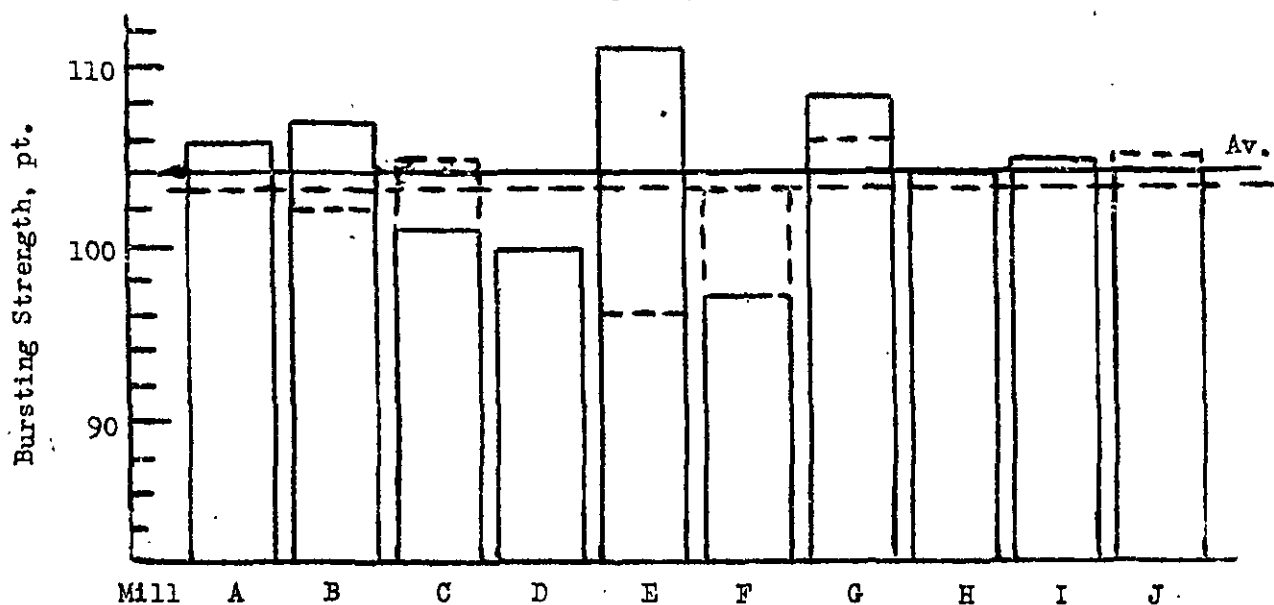
Figure 2



COMPARISON OF CALIPER RESULTS
(Period Dec. 1 - Dec. 31)

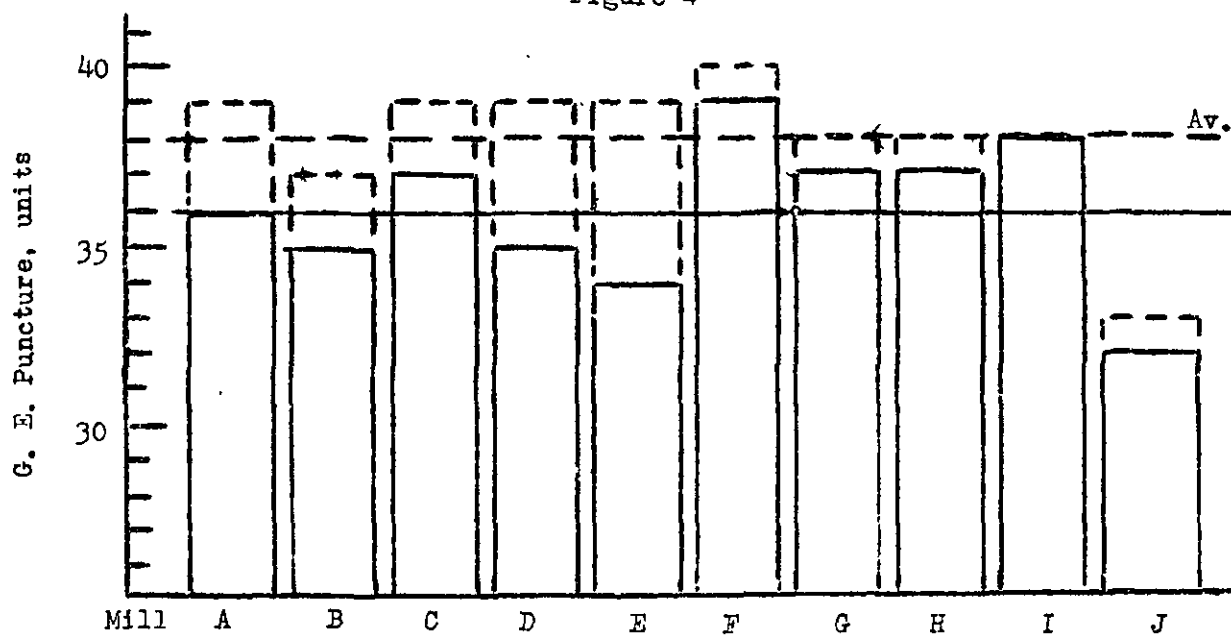
—— Current Mill Average
--- Cumulative Mill Average

Figure 3

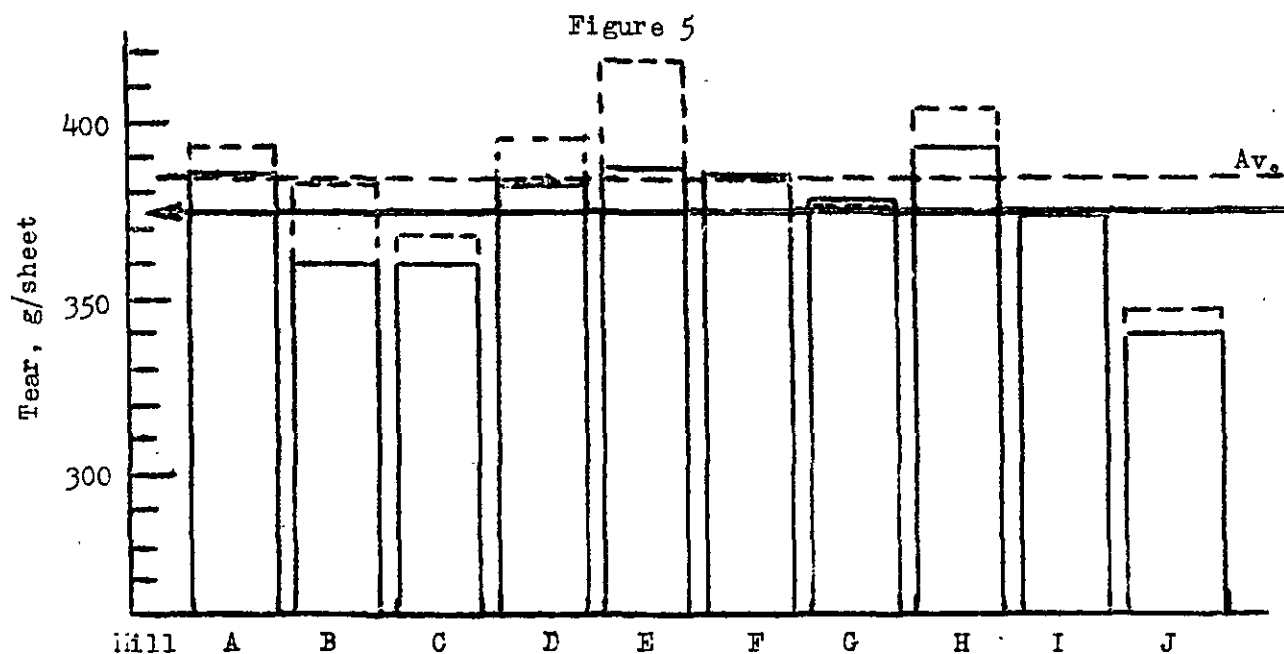


COMPARISON OF BURSTING STRENGTH RESULTS
(Period Dec. 1 - Dec. 31)

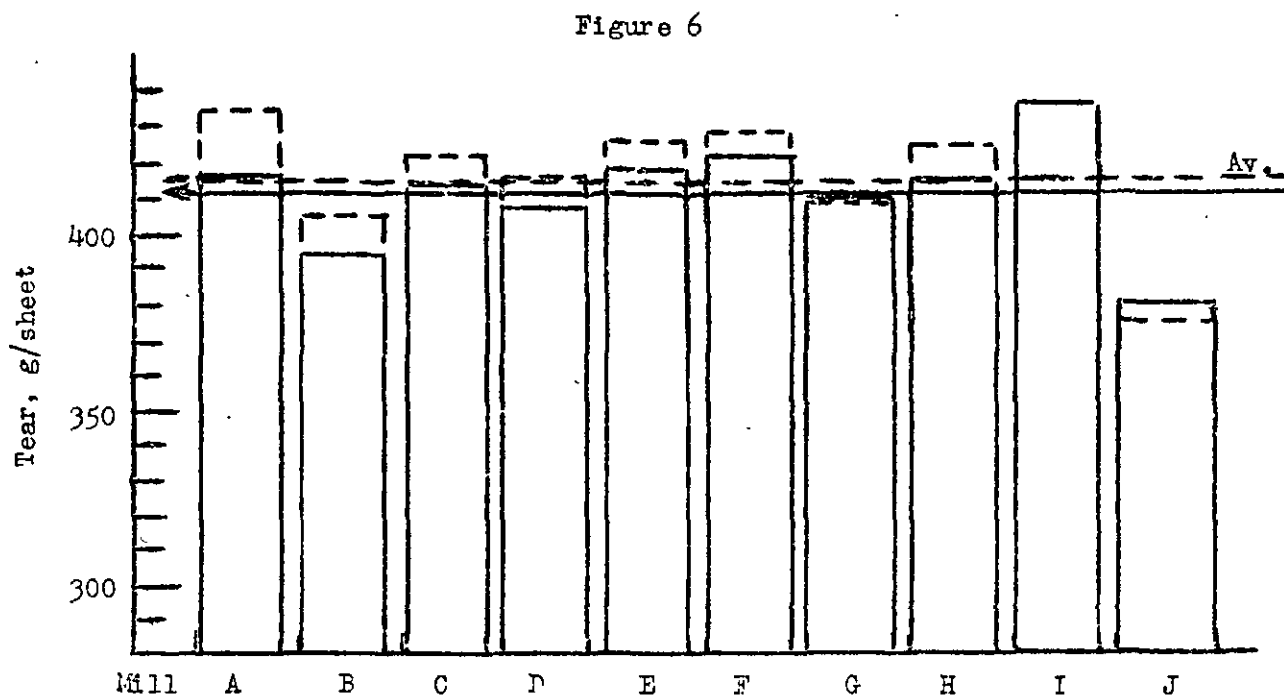
Figure 4



COMPARISON OF G. E. PUNCTURE RESULTS
(Period Dec. 1 - Dec. 31)



COMPARISON OF TEAR RESULTS, Machine Direction
(Period Dec. 1 - Dec. 31)



COMPARISON OF TEAR RESULTS, Across-Machine Direction
(Period Dec. 1 - Dec. 31)

TABLE III
SUMMARY OF INDIVIDUAL TEST LOTS--DECEMBER 1 THROUGH DECEMBER 31, 1948

| Mch. No. | Basis Weight, lb. | | Caliper, points | | JUMBO Mullen Burst, points | | G. E. Puncture, units | | Elmendorf Tear, g./sheet | | Across | | | | | | | |
|----------------------------------|----------------------|------|--------------------|------|----------------------------------|------|-----------------------------|------|-----------------------------|------|--------|------|-----|-----|------------------|-----|-----|------------------|
| | Max. | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. | Min. | | | | | | |
| <u>Mill A--42-lb. Linerboard</u> | | | | | | | | | | | | | | | | | | |
| 2 | 44.2 | 41.6 | 43.0 | 14.4 | 12.6 | 13.7 | 125 | 89 | 104 | 38 | 30 | 34 | 440 | 312 | 357 ^a | 440 | 360 | 404 ^a |
| 2 | 43.0 | 41.0 | 42.0 | 14.2 | 10.9 | 13.1 | 128 | 76 | 107 | 36 | 29 | 32 | 392 | 304 | 357 ^a | 424 | 352 | 384 ^a |
| 1 | 44.0 | 41.8 | 43.0 | 16.2 | 14.1 | 15.5 | 112 | 81 | 97 | 37 | 33 | 35 | 464 | 368 | 402 ^a | 440 | 376 | 410 ^a |
| 2 | 44.2 | 42.0 | 43.4 | 15.8 | 13.9 | 14.7 | 134 | 95 | 112 | 40 | 35 | 37 | 448 | 352 | 406 ^a | 512 | 360 | 425 ^a |
| 2 | 44.0 | 42.2 | 43.6 | 15.0 | 14.0 | 14.7 | 123 | 91 | 108 | 43 | 36 | 39 | 456 | 320 | 393 ^a | 496 | 384 | 433 ^a |
| 2 | 45.6 | 43.4 | 44.1 | 15.4 | 13.8 | 14.6 | 128 | 85 | 109 | 43 | 36 | 40 | 456 | 344 | 397 ^a | 496 | 400 | 447 ^a |
| | | | 43.2 | | | 14.4 | | | 106 | | | 36 | | | 385 | | | 417 |
| | | | 42.6 | | | 14.7 | | | 103 | | | 39 | | | 392 | | | 434 |
| | | | 101.4 | | | 98.0 | | | 102.9 | | | 92.3 | | | 98.2 | | | 96.1 |
| | | | 100.2 | | | 96.0 | | | 102.9 | | | 94.7 | | | 100.5 | | | 100.5 |

ings for one or more specimens which tore beyond the 3/8-inch limit.

TABLE III

SUMMARY OF INDIVIDUAL TEST LOTS--DECEMBER 1 THROUGH DECEMBER 31, 1948

| File No. | Mill Code | Date Recd. | Date Made | Mch. No. | Basis Weight, lb. | | Caliper, points | | JUMBO Mullen Burst, points | | G. E. Puncture, units | | Elmendorf g./shee | | | | | | |
|---------------------------|-----------|------------|-----------|----------|-------------------|------|-----------------|------|----------------------------|------|-----------------------|------|-------------------|----|------|------|-----|-----|------------------|
| | | | | | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. | In | Max. | Min. | Av. | | |
| Mill A--42-lb. Linerboard | | | | | | | | | | | | | | | | | | | |
| 134692 | A-82 | 12/ 4/48 | 11/29/48 | 2 | 44.2 | 41.6 | 43.0 | 14.4 | 12.6 | 13.7 | 125 | 89 | 104 | 38 | 30 | 34 | 440 | 312 | 357 ^a |
| 134693 | A-83 | 12/ 4/48 | 11/30/48 | 2 | 43.0 | 41.0 | 42.0 | 14.2 | 10.9 | 13.1 | 128 | 76 | 107 | 36 | 29 | 32 | 392 | 304 | 357 ^a |
| 134788 | A-84 | 12/11/48 | 12/ 8/48 | 1 | 44.0 | 41.8 | 43.0 | 16.2 | 14.1 | 15.5 | 112 | 81 | 97 | 37 | 33 | 35 | 464 | 368 | 402 ^a |
| 134835 | A-85 | 12/17/48 | 12/13/48 | 2 | 44.2 | 42.0 | 43.4 | 15.8 | 13.9 | 14.7 | 134 | 95 | 112 | 40 | 35 | 37 | 448 | 352 | 406 ^a |
| 134836 | A-86 | 12/17/48 | 12/14/48 | 2 | 44.0 | 42.2 | 43.6 | 15.0 | 14.0 | 14.7 | 123 | 91 | 108 | 43 | 36 | 39 | 456 | 320 | 393 ^a |
| 134969 | A-87 | 12/31/48 | 12/28/48 | 2 | 45.6 | 43.4 | 44.1 | 15.4 | 13.8 | 14.6 | 128 | 85 | 109 | 43 | 36 | 40 | 456 | 344 | 397 ^a |
| Current Mill Average: | | | | | | | 43.2 | | 14.4 | | 106 | | | | 36 | | | | 385 |
| Cumulative Mill Average: | | | | | | | 42.6 | | 14.7 | | 103 | | | | 39 | | | | 392 |
| Mill Factor, % | | | | | | | 101.4 | | 98.0 | | 102.9 | | | | 92.3 | | | | 98.2 |
| Mill Index, %: | | | | | | | 100.2 | | 96.0 | | 102.9 | | | | 94.7 | | | | 100.5 |

^a This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

TABLE IV

SUMMARY OF INDIVIDUAL TEST LOTS--DECEMBER 1 THROUGH DECEMBER 31, 1948--continued

| Mch. No. | Basis Weight, lb. | | Caliper, points | | JUMBO Mullen Burst, points | | G. E. Puncture, units | | Elmendorf Tear, g./sheet | | Across | | | | | | | |
|----------------------------------|----------------------|------|--------------------|------|----------------------------------|------|-----------------------------|------|-----------------------------|------|--------|------|-----|-----|------------------|-----|-----|------------------|
| | Max. | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. | Min. | | | | | | |
| <u>MILL B--42-lb. Linerboard</u> | | | | | | | | | | | | | | | | | | |
| 4/48 1 | 44.4 | 42.0 | 43.5 | 15.7 | 14.6 | 15.0 | 122 | 95 | 107 | 37 | 30 | 34 | 400 | 320 | 355 | 432 | 336 | 381 |
| 5/48 1 | 45.8 | 43.4 | 44.3 | 16.9 | 15.0 | 15.7 | 127 | 83 | 107 | 35 | 31 | 33 | 456 | 336 | 376 ^a | 432 | 352 | 387 ^a |
| 5/48 1 | 46.2 | 44.2 | 45.4 | 16.7 | 14.0 | 15.7 | 117 | 83 | 104 | 39 | 33 | 36 | 480 | 328 | 382 ^a | 464 | 408 | 435 ^a |
| 1/48 1 | 45.8 | 42.2 | 44.5 | 15.7 | 14.7 | 15.2 | 129 | 84 | 105 | 36 | 32 | 34 | 376 | 288 | 335 ^a | 424 | 352 | 389 ^a |
| 5/48 3 | 45.0 | 42.6 | 43.7 | 17.1 | 14.1 | 15.4 | 129 | 88 | 105 | 37 | 32 | 34 | 352 | 296 | 329 | 432 | 344 | 370 ^a |
| 1/48 3 | 46.0 | 44.2 | 45.3 | 16.1 | 13.6 | 15.1 | 131 | 91 | 104 | 39 | 31 | 35 | 432 | 328 | 367 ^a | 424 | 376 | 400 ^a |
| 3/48 3 | 43.8 | 42.6 | 43.3 ^b | 15.4 | 14.4 | 15.0 | 121 | 88 | 105 | 35 | 31 | 33 | 392 | 320 | 350 | 416 | 344 | 367 ^a |
| 3/48 3 | 44.4 | 42.2 | 43.6 | 14.6 | 13.4 | 14.0 | 130 | 88 | 105 | 40 | 35 | 37 | 432 | 328 | 361 | 432 | 352 | 402 ^a |
| 5/48 3 | 43.8 | 41.4 | 42.5 | 14.8 | 12.7 | 14.0 | 132 | 98 | 115 | 37 | 32 | 35 | 432 | 312 | 360 ^a | 432 | 376 | 405 ^a |
| 5/48 3 | 44.4 | 42.2 | 43.2 | 15.6 | 13.1 | 14.3 | 126 | 81 | 110 | 39 | 32 | 34 | 456 | 304 | 365 ^a | 448 | 360 | 399 ^a |
| 5/48 3 | 42.6 | 41.4 | 42.2 | 14.1 | 12.6 | 13.5 | 120 | 81 | 108 | 34 | 30 | 33 | 408 | 320 | 364 ^a | 464 | 352 | 394 ^a |
| 1/48 3 | 43.6 | 41.8 | 42.4 | 14.2 | 12.7 | 13.5 | 122 | 94 | 109 | 36 | 33 | 34 | 400 | 328 | 359 ^a | 440 | 344 | 395 ^a |
| 1/48 3 | 44.4 | 41.8 | 42.6 | 14.4 | 13.0 | 13.7 | 128 | 85 | 106 | 38 | 34 | 36 | 408 | 344 | 374 ^a | 456 | 344 | 395 ^a |
| | | | 43.6 | | 14.6 | | | | 107 | | 35 | | | | 360 | | | 394 |
| | | | 43.3 | | 15.1 | | | | 102 | | 37 | | | | 382 | | | 405 |
| | | | 100.7 | | 96.7 | | | | 104.9 | | 94.6 | | | | 94.2 | | | 97.3 |
| | | | 101.2 | | 97.3 | | | | 103.9 | | 92.1 | | | | 94.0 | | | 94.9 |

ings for one or more specimens which tore beyond the 3/8-inch limit.
one contained a scum mark; a one-quarter inch square of board was missing.

TABLE IV

SUMMARY OF INDIVIDUAL TEST LOTS--DECEMBER 1 THROUGH DECEMBER 31, 1948--continued

| File No. | Mill Code | Date Recd. | Date Made | Mch. No. | Basis Weight, lb. | | Caliper, points | | JUMBO Mullen Burst, points | | G. E. Puncture, units | | In | | | | |
|---------------------------|-----------|------------|-----------|----------|-------------------|------|-------------------|------|----------------------------|------|-----------------------|------|-------|-----|------|----|-----|
| | | | | | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | | Av. | | | |
| Mill B--42-lb. Linerboard | | | | | | | | | | | | | | | | | |
| 134676 | B-117 | 12/ 3/48 | 11/24/48 | 1 | 44.4 | 42.0 | 43.5 | 15.7 | 14.6 | 15.0 | 122 | 95 | 107 | 37 | 30 | 34 | 400 |
| 134668 | B-118 | 12/ 2/48 | 11/25/48 | 1 | 45.8 | 43.4 | 44.3 | 16.9 | 15.0 | 15.7 | 127 | 83 | 107 | 35 | 31 | 33 | 456 |
| 134741 | B-119 | 12/ 8/48 | 11/30/48 | 1 | 46.2 | 44.2 | 45.4 | 16.7 | 14.0 | 15.7 | 117 | 83 | 104 | 39 | 33 | 36 | 480 |
| 134742 | B-120 | 12/ 8/48 | 12/ 1/48 | 1 | 45.8 | 42.2 | 44.5 | 15.7 | 14.7 | 15.2 | 129 | 84 | 105 | 36 | 32 | 34 | 376 |
| 134837 | B-121 | 12/17/48 | 12/ 6/48 | 3 | 45.0 | 42.6 | 43.7 | 17.1 | 14.1 | 15.4 | 129 | 88 | 105 | 37 | 32 | 34 | 352 |
| 134838 | B-122 | 12/17/48 | 12/ 7/48 | 3 | 46.0 | 44.2 | 45.3 | 16.1 | 13.6 | 15.1 | 131 | 91 | 104 | 39 | 31 | 35 | 432 |
| 134839 | B-123 | 12/17/48 | 12/ 8/48 | 3 | 43.8 | 42.6 | 43.3 ^b | 15.4 | 14.4 | 15.0 | 121 | 88 | 105 | 35 | 31 | 33 | 392 |
| 134849 | B-124 | 12/20/48 | 12/12/48 | 3 | 44.4 | 42.2 | 43.6 | 14.6 | 13.4 | 14.0 | 130 | 88 | 105 | 40 | 35 | 37 | 432 |
| 134850 | B-125 | 12/20/48 | 12/13/48 | 3 | 43.8 | 41.4 | 42.5 | 14.8 | 12.7 | 14.0 | 132 | 98 | 115 | 37 | 32 | 35 | 432 |
| 134882 | B-126 | 12/23/48 | 12/14/48 | 3 | 44.4 | 42.2 | 43.2 | 15.6 | 13.1 | 14.3 | 126 | 81 | 110 | 39 | 32 | 34 | 456 |
| 134966 | B-127 | 12/31/48 | 12/20/48 | 3 | 42.6 | 41.4 | 42.2 | 14.1 | 12.6 | 13.5 | 120 | 81 | 108 | 34 | 30 | 33 | 408 |
| 134967 | B-128 | 12/31/48 | 12/21/48 | 3 | 43.6 | 41.8 | 42.4 | 14.2 | 12.7 | 13.5 | 122 | 94 | 109 | 36 | 33 | 34 | 400 |
| 134968 | B-129 | 12/31/48 | 12/22/48 | 3 | 44.4 | 41.8 | 42.6 | 14.4 | 13.0 | 13.7 | 128 | 85 | 106 | 38 | 34 | 36 | 408 |
| Current Mill Average: | | | | | 43.6 | | 43.6 | | 14.6 | | 14.6 | | 107 | | 35 | | |
| Cumulative Mill Average: | | | | | 43.3 | | 43.3 | | 15.1 | | 15.1 | | 102 | | 37 | | |
| Mill Factor, %: | | | | | 100.7 | | 100.7 | | 96.7 | | 96.7 | | 104.9 | | 94.6 | | |
| Mill Index, %: | | | | | 101.2 | | 101.2 | | 97.3 | | 97.3 | | 103.9 | | 92.1 | | |

^a This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.^b One of the basis weight specimens contained a scum mark; a one-quarter inch square of board was missing.

TABLE V
SUMMARY OF INDIVIDUAL TEST LOTS--DECEMBER 1 THROUGH DECEMBER 31, 1948--continued

| Mch. No. | Basis Weight, lb. | | Caliper, points | | JUMBO Mullen Burst, points | | G. E. Puncture, units | | Elmendorf Tear, g./sheet | | Across | | | | | | | |
|----------------------------------|----------------------|------|--------------------|------|----------------------------------|------|-----------------------------|-----|-----------------------------|------|--------|------|------|-----|------------------|-----|-----|------------------|
| | Max. | Min. | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. | | | | |
| <u>Mill C--42-lb. Linerboard</u> | | | | | | | | | | | | | | | | | | |
| +8 1 | 44.4 | 42.4 | 43.3 | 14.9 | 13.5 | 14.4 | 124 | 80 | 100 | 42 | 34 | 38 | 432 | 328 | 361 ^a | 480 | 368 | 424 ^a |
| +8 1 | 42.4 | 41.0 | 41.8 | 14.7 | 13.0 | 14.0 | 120 | 88 | 100 | 40 | 34 | 37 | 384 | 296 | 332 ^a | 424 | 368 | 399 ^a |
| +8 1 | 44.0 | 42.0 | 42.9 | 14.8 | 12.8 | 14.1 | 129 | 71 | 102 | 39 | 34 | 36 | 424 | 320 | 367 | 496 | 368 | 420 ^a |
| +8 1 | 44.4 | 41.8 | 42.8 | 15.6 | 12.3 | 14.4 | 125 | 74 | 97 | 42 | 34 | 39 | 440 | 328 | 369 ^a | 448 | 328 | 413 ^a |
| +8 1 | 43.0 | 41.6 | 42.2 | 14.9 | 13.7 | 14.5 | 124 | 72 | 102 | 39 | 33 | 36 | 416 | 312 | 369 ^a | 472 | 344 | 412 ^a |
| +8 1 | 44.2 | 42.2 | 43.5 | 15.0 | 12.5 | 14.3 | 122 | 78 | 102 | 43 | 35 | 38 | 416 | 296 | 365 | 432 | 376 | 407 ^a |
| | | | 42.8 | | | 14.3 | | | 101 | | | 37 | | | 360 | | | 413 |
| | | | 43.0 | | | 14.4 | | | 105 | | | 39 | | | 368 | | | 421 |
| | | | 99.5 | | | 99.3 | | | 96.2 | | | 94.9 | | | 97.8 | | | 98.1 |
| | | | 99.3 | | | 95.3 | | | 98.1 | | | 97.4 | | | 94.0 | | | 99.5 |

ings for one or more specimens which tore beyond the 3/8-inch limit.

TABLE V

SUMMARY OF INDIVIDUAL TEST LOTS--DECEMBER 1 THROUGH DECEMBER 31, 1948--continued

| File No. | Mill Code | Date Recd. | Date Made | Mch. No. | Basis Weight, lb. | | Caliper, points | | JUMBO Mullen Burst, points | | | G. E. Puncture, units | | In Mir. | | | | |
|---------------------------|-----------|------------|-----------|----------|-------------------|------|-----------------|------|----------------------------|------|------|-----------------------|------|---------|----|------|-----|-----|
| | | | | | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. | | | | | |
| | | | | | | | | | | | | | | | | | | |
| Mill C--42-1b. Linerboard | | | | | | | | | | | | | | | | | | |
| 134715 | C-83 | 12/ 6/48 | 11/29/48 | 1 | 44.4 | 42.4 | 43.3 | 14.9 | 13.5 | 14.4 | 124 | 80 | 100 | 42 | 34 | 38 | 432 | 328 |
| 134749 | C-84 | 12/ 9/48 | 12/ 2/48 | 1 | 42.4 | 41.0 | 41.8 | 14.7 | 13.0 | 14.0 | 120 | 88 | 100 | 40 | 34 | 37 | 384 | 296 |
| 134846 | C-85 | 12/18/48 | 12/ 6/48 | 1 | 44.0 | 42.0 | 42.9 | 14.8 | 12.8 | 14.1 | 129 | 71 | 102 | 39 | 34 | 36 | 424 | 320 |
| 134851 | C-86 | 12/20/48 | 12/ 9/48 | 1 | 44.4 | 41.8 | 42.8 | 15.6 | 12.3 | 14.4 | 125 | 74 | 97 | 42 | 34 | 39 | 440 | 328 |
| 134847 | C-87 | 12/18/48 | 12/13/48 | 1 | 43.0 | 41.6 | 42.2 | 14.9 | 13.7 | 14.5 | 124 | 72 | 102 | 39 | 33 | 36 | 416 | 312 |
| 134858 | C-88 | 12/21/48 | 12/16/48 | 1 | 44.2 | 42.2 | 43.5 | 15.0 | 12.5 | 14.3 | 122 | 78 | 102 | 43 | 35 | 38 | 416 | 296 |
| Current Mill Average: | | | | | | | 42.8 | | | 14.3 | | | 101 | | | 37 | | |
| Cumulative Mill Average: | | | | | | | 43.0 | | | 14.4 | | | 105 | | | 39 | | |
| Mill Factor, %: | | | | | | | 99.5 | | | 99.3 | | | 96.2 | | | 94.9 | | |
| Mill Index, %: | | | | | | | 99.3 | | | 95.3 | | | 98.1 | | | 97.4 | | |

^a This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

TABLE VI

SUMMARY OF INDIVIDUAL TEST LOTS--DECEMBER 1 THROUGH DECEMBER 31, 1948--continued

| Mch. No. | Basis Weight, lb. | | Caliper, points | | JUNBO Mullen Burst, points | | G. E. Puncture, units | | Elmendorf Tear, g./sheet | | Across | |
|---------------------------|----------------------|------|--------------------|------|----------------------------------|------|-----------------------------|------|-----------------------------|------|--------|-----------------|
| | Max. | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. | Min. |
| Mill D--42-lb. Linerboard | | | | | | | | | | | | |
| 3 | 44.0 | 42.0 | 43.0 | 17.0 | 15.0 | 16.4 | 132 | 76 | 102 | 41 | 34 | 38 |
| 4 | 44.2 | 42.2 | 43.2 | 17.6 | 16.2 | 16.8 | 121 | 78 | 99 | 40 | 33 | 36 |
| 3 | 44.4 | 42.0 | 43.8 | 17.0 | 15.6 | 16.4 | 123 | 81 | 101 | 39 | 33 | 37 |
| 3 | 44.4 | 42.0 | 43.8 | 17.3 | 15.8 | 16.5 | 115 | 70 | 98 | 41 | 34 | 37 |
| 3 ^b | 44.0 | 42.4 | 43.5 | 18.0 | 15.1 | 16.3 | 121 | 94 | 107 | 39 | 32 | 35 |
| 3 | 44.0 | 42.0 | 42.9 | 16.9 | 15.0 | 15.8 | 119 | 83 | 99 | 34 | 28 | 32 |
| 3 | 44.0 | 41.6 | 42.5 | 16.7 | 14.3 | 15.4 | 123 | 67 | 102 | 36 | 31 | 33 |
| 3 | 43.6 | 41.4 | 42.3 | 14.8 | 13.4 | 14.2 | 130 | 86 | 109 | 43 | 36 | 39 |
| 3 | 45.6 | 42.6 | 43.8 | 17.0 | 14.8 | 15.8 | 114 | 79 | 103 | 38 | 34 | 35 |
| 3 | 45.6 | 42.2 | 43.4 | 16.7 | 14.8 | 15.9 | 118 | 67 | 97 | 40 | 35 | 37 |
| 3 | 44.8 | 42.4 | 43.7 | 15.8 | 13.0 | 14.7 | 118 | 77 | 101 | 39 | 32 | 36 ^c |
| 3 | 43.8 | 42.0 | 43.0 | 15.7 | 13.9 | 14.8 | 118 | 75 | 95 | 39 | 32 | 36 |
| 3 | 44.0 | 41.8 | 42.4 | 15.7 | 13.1 | 14.6 | 112 | 68 | 94 | 36 | 32 | 34 |
| 3 | 44.0 | 42.2 | 43.1 | 15.9 | 13.7 | 14.9 | 115 | 66 | 98 | 37 | 32 | 34 |
| 3 | 45.0 | 42.2 | 43.1 | 14.8 | 13.0 | 14.2 | 119 | 78 | 99 | 35 | 30 | 32 |
| | | | 43.2 | | 15.5 | | 100 | | | | 35 | |
| | | | 43.5 | | 15.9 | | 100 | | | | 39 | |
| | | | 99.3 | | 97.5 | | 100.0 | | | | 89.7 | |
| | | | 100.2 | | 103.3 | | 97.1 | | | | 92.1 | |
| | | | | | | | | | | 382 | | 408 |
| | | | | | | | | | | 395 | | 416 |
| | | | | | | | | | | 96.7 | | 98.1 |
| | | | | | | | | | | 99.7 | | 98.3 |

ings for one or more specimens which tore beyond the 3/8-inch limit.
le; the mill data sheet gives the date of manufacture as December 4, 1948.
ily 22 readings instead of 24.

TABLE VI

SUMMARY OF INDIVIDUAL TEST LOTS--DECEMBER 1 THROUGH DECEMBER 31, 1948--continued

| File No. | Mill Code | Date Recd. | Date Made | Mch. No. | Basis Weight, lb. | | Caliper, points | | JUMBO Mullen Burst, points | | G. E. Puncture, units | | In Min | | | | | |
|---------------------------|-----------|------------|-----------------------|----------|-------------------|------|-----------------|------|----------------------------|------|-----------------------|------|--------|-----|----|-----------------|-----|-----|
| | | | | | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | | Av. | | | | |
| Mill D--42-lb. Linerboard | | | | | | | | | | | | | | | | | | |
| 134665 | D-61 | 12/ 2/48 | 11/27/48 | 4 | 44.0 | 42.0 | 43.0 | 17.0 | 15.0 | 16.4 | 132 | 76 | 102 | 41 | 34 | 38 | 448 | 392 |
| 134666 | D-62 | 12/ 2/48 | 11/28/48 | 4 | 44.2 | 42.2 | 43.2 | 17.6 | 16.2 | 16.8 | 121 | 78 | 99 | 40 | 33 | 36 | 504 | 384 |
| 134667 | D-63 | 12/ 2/48 | 11/29/48 | 4 | 44.4 | 42.0 | 43.8 | 17.0 | 15.6 | 16.4 | 123 | 81 | 101 | 39 | 33 | 37 | 456 | 344 |
| 134714 | D-64 | 12/ 6/48 | 11/30/48 | 4 | 44.4 | 42.0 | 43.8 | 17.3 | 15.8 | 16.5 | 115 | 70 | 98 | 41 | 34 | 37 | 432 | 344 |
| 134743 | D-65 | 12/ 8/48 | 12/ 5/48 ^b | 4 | 44.0 | 42.4 | 43.5 | 18.0 | 15.1 | 16.3 | 121 | 94 | 107 | 39 | 32 | 35 | 448 | 360 |
| 134744 | D-66 | 12/ 8/46 | 12/ 6/48 | 4 | 44.0 | 42.0 | 42.9 | 16.9 | 15.0 | 15.8 | 119 | 83 | 99 | 34 | 28 | 32 | 416 | 336 |
| 134779 | D-67 | 12/10/48 | 12/ 7/48 | 4 | 44.0 | 41.6 | 42.5 | 16.7 | 14.3 | 15.4 | 123 | 67 | 102 | 36 | 31 | 33 | 432 | 336 |
| 134789 | D-68 | 12/11/48 | 12/ 8/48 | 4 | 43.6 | 41.4 | 42.3 | 14.8 | 13.4 | 14.2 | 130 | 86 | 109 | 43 | 36 | 39 | 512 | 344 |
| 134823 | D-69 | 12/15/48 | 12/12/48 | 4 | 45.6 | 42.6 | 43.8 | 17.0 | 14.8 | 15.8 | 114 | 79 | 103 | 38 | 34 | 35 | 424 | 312 |
| 134824 | D-70 | 12/15/48 | 12/13/48 | 4 | 45.6 | 42.2 | 43.4 | 16.7 | 14.8 | 15.9 | 118 | 67 | 97 | 40 | 35 | 37 | 440 | 320 |
| 134866 | D-71 | 12/22/48 | 12/17/48 | 4 | 44.8 | 42.4 | 43.7 | 15.8 | 13.0 | 14.7 | 118 | 77 | 101 | 39 | 32 | 36 ^c | 384 | 336 |
| 134867 | D-72 | 12/22/48 | 12/18/48 | 4 | 43.8 | 42.0 | 43.0 | 15.7 | 13.9 | 14.8 | 118 | 75 | 95 | 39 | 32 | 36 | 424 | 312 |
| 134868 | D-73 | 12/22/48 | 12/19/48 | 4 | 44.0 | 41.8 | 42.4 | 15.7 | 13.1 | 14.6 | 112 | 68 | 94 | 36 | 32 | 34 | 392 | 288 |
| 134883 | D-74 | 12/23/48 | 12/20/48 | 4 | 44.0 | 42.2 | 43.1 | 15.9 | 13.7 | 14.9 | 115 | 66 | 98 | 37 | 32 | 34 | 408 | 336 |
| 134901 | D-75 | 12/24/48 | 12/21/48 | 4 | 45.0 | 42.2 | 43.1 | 14.8 | 13.0 | 14.2 | 119 | 78 | 99 | 35 | 30 | 32 | 448 | 280 |
| Current Mill Average: | | | | | 43.2 | | 15.5 | | 100 | | 35 | | | | | | | |
| Cumulative Mill Average: | | | | | 43.5 | | 15.9 | | 100 | | 39 | | | | | | | |
| Mill Factor, %: | | | | | 99.3 | | 97.5 | | 100.0 | | 89.7 | | | | | | | |
| Mill Index, %: | | | | | 100.2 | | 103.3 | | 97.1 | | 92.1 | | | | | | | |

^a This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.^b This date appeared on the sample; the mill data sheet gives the date of manufacture as December 4, 1948.^c This value is the average of only 22 readings instead of 24.

TABLE VII

MARY OF INDIVIDUAL TEST LOTS--DECEMBER 1 THROUGH DECEMBER 31, 1948--continued

| Mch. No. | Basis Weight, lb. | | Caliper, points | | JUMBO Mullen Burst, points | | G. E. Puncture, units | | Elmendorf Tear, g./sheet | | Across | | | | | | |
|---------------------------|----------------------|------|--------------------|------|----------------------------------|------|-----------------------------|------|-----------------------------|-----|--------|------|-----|------------------|-----|-----|------------------|
| | Max. | Min. | Max. | Min. | Max. | Min. | Max. | Min. | In | Av. | Max. | Min. | Av. | | | | |
| Mill E--42-lb. Linerboard | | | | | | | | | | | | | | | | | |
| | 46.0 | 44.0 | 45.0 | 14.8 | 13.8 | 133 | 81 | 108 | 37 | 32 | 34 | 440 | 288 | 383 | 464 | 336 | 401 ^a |
| | 46.2 | 43.0 | 44.7 | 14.7 | 12.9 | 143 | 78 | 113 | 37 | 31 | 35 | 472 | 312 | 391 ^a | 512 | 392 | 435 ^a |
| | | | 44.8 | | 13.8 | | 111 | | | | 34 | | | 387 | | | 413 |
| | | | 43.7 | | 14.8 | | 96 | | | | 39 | | | 418 | | | 426 |
| | | | 102.5 | | 93.2 | | 115.6 | | | | 87.2 | | | 92.6 | | | 98.1 |
| | | | 103.9 | | 92.0 | | 107.8 | | | | 89.5 | | | 101.0 | | | 100.7 |

TABLE VIII

| Mill F--42-lb. Linerboard | | | | | | | | | | | | | | | | | | |
|---------------------------|------|------|-------|------|-------|------|-----|----|------|----|----|-------|-----|-----|------------------|-----|-----|------------------|
| - | 45.2 | 42.6 | 43.9 | 17.2 | 15.0 | 16.2 | 114 | 79 | 102 | 42 | 36 | 39 | 440 | 328 | 389 ^a | 512 | 352 | 441 ^a |
| - | 44.6 | 44.0 | 44.4 | 16.9 | 15.7 | 16.3 | 110 | 84 | 100 | 42 | 36 | 39 | 424 | 336 | 380 ^a | 480 | 368 | 427 ^a |
| - | 43.2 | 41.2 | 42.1 | 15.9 | 14.6 | 15.5 | 117 | 84 | 99 | 40 | 35 | 38 | 400 | 312 | 358 | 448 | 352 | 403 ^a |
| - | 43.8 | 41.0 | 43.0 | 15.9 | 14.0 | 14.8 | 105 | 78 | 93 | 39 | 33 | 35 | 392 | 312 | 346 ^a | 480 | 384 | 412 ^a |
| - | 45.6 | 43.6 | 44.5 | 16.8 | 15.2 | 15.9 | 119 | 81 | 97 | 43 | 36 | 39 | 424 | 312 | 381 | 456 | 368 | 417 ^a |
| - | 46.4 | 44.0 | 45.2 | 16.5 | 15.0 | 15.6 | 108 | 78 | 94 | 46 | 38 | 41 | 464 | 328 | 404 ^a | 488 | 384 | 427 ^a |
| - | 46.2 | 44.4 | 45.5 | 17.5 | 16.3 | 16.8 | 114 | 76 | 98 | 45 | 38 | 41 | 496 | 360 | 431 ^a | 472 | 400 | 447 ^a |
| - | 44.0 | 42.6 | 43.6 | 15.9 | 14.1 | 15.0 | 115 | 71 | 98 | 40 | 35 | 38 | 432 | 360 | 388 ^a | 480 | 336 | 409 ^a |
| - | 45.0 | 43.4 | 43.8 | 16.0 | 14.4 | 15.1 | 110 | 73 | 96 | 41 | 35 | 38 | 408 | 336 | 379 ^a | 472 | 368 | 423 ^a |
| - | 44.2 | 40.4 | 43.2 | 15.9 | 13.6 | 15.0 | 126 | 83 | 98 | 41 | 35 | 38 | 456 | 344 | 386 ^a | 448 | 360 | 409 ^a |
| - | 44.6 | 42.8 | 43.7 | 16.7 | 15.1 | 15.8 | 116 | 80 | 98 | 40 | 34 | 38 | 424 | 344 | 381 ^a | 448 | 376 | 412 ^a |
| - | | | 43.9 | | 15.6 | | | | 97 | | | 39 | | | 384 | | | 421 |
| - | | | 43.4 | | 15.3 | | | | 103 | | | 40 | | | 384 | | | 428 |
| - | | | 101.2 | | 102.0 | | | | 94.2 | | | 97.5 | | | 100.0 | | | 98.4 |
| - | | | 101.9 | | 104.0 | | | | 94.2 | | | 102.6 | | | 100.3 | | | 101.4 |

for one or more specimens which tore beyond the 3/8-inch limit.
the mill data sheet gives the date of manufacture as November 29, 1948.
ion as to Mill Code and date of manufacture; however, it was assumed to be Sample F-74.
series marked "F-6" and none marked "F-5"; one sheet arbitrarily was treated as "F-5."

TABLE VII

SUMMARY OF INDIVIDUAL TEST LOTS--DECEMBER 1 THROUGH DECEMBER 31, 1948--continued

| File No. | Mill Code | Date Recd. | Date Made | Mch. No. | Basis Weight, lb. | | Caliper, points | | JUMBO Mullen Burst, points | | G. E. Puncture, units | | | | | | |
|--------------------------|-----------|------------|-----------|----------|-------------------|------|-----------------|------|----------------------------|------|-----------------------|------|-------|----|----|------|-----|
| | | | | | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. | | | | |
| Mill E-42-lb. Linerboard | | | | | | | | | | | | | | | | | |
| 134781 | E-50 | 12/10/48 | 12/7/48 | 1 | 46.0 | 44.0 | 45.0 | 14.8 | 11.8 | 13.8 | 133 | 81 | 108 | 37 | 32 | 34 | 440 |
| 134842 | E-51 | 12/17/48 | 12/13/48 | 1 | 46.2 | 43.0 | 44.7 | 14.7 | 12.9 | 13.7 | 143 | 78 | 113 | 37 | 31 | 35 | 472 |
| Current Mill Average: | | | | | | | 44.8 | | | 13.8 | | | 111 | | | 34 | |
| Cumulative Mill Average | | | | | | | 43.7 | | | 14.8 | | | 96 | | | 39 | |
| Mill Factor, %: | | | | | | | 102.5 | | | 93.2 | | | 115.6 | | | 87.2 | |
| Mill Index, %: | | | | | | | 103.9 | | | 92.0 | | | 107.8 | | | 89.5 | |

TABLE VIII

| Mill F--42-lb. Linerboard | | | | | | | | | | | | | | | | | |
|---------------------------|-------------------|----------|-----------------------|----|-------|------|------|-------|------|------|-----|----|------|----|----|-------|-----|
| 134664 | F-71 | 12/2/48 | 11/15/48 | -- | 45.2 | 42.6 | 43.9 | 17.2 | 15.0 | 16.2 | 114 | 79 | 102 | 42 | 36 | 39 | 440 |
| 134694 | F-72 | 12/4/48 | 11/26/48 | -- | 44.6 | 44.0 | 44.4 | 16.9 | 15.7 | 16.3 | 110 | 84 | 100 | 42 | 36 | 39 | 424 |
| 134711 | F-73 | 12/6/48 | 11/30/48 ^b | -- | 43.2 | 41.2 | 42.1 | 15.9 | 14.6 | 15.5 | 117 | 84 | 99 | 40 | 35 | 38 | 400 |
| 134752 | F-74 ^c | 12/9/48 | 12/2/48 | -- | 43.8 | 41.0 | 43.0 | 15.9 | 14.0 | 14.8 | 105 | 78 | 93 | 39 | 33 | 36 | 392 |
| 134780 | F-75 | 12/10/48 | 12/3/48 | -- | 45.6 | 43.6 | 44.5 | 16.8 | 15.2 | 15.9 | 119 | 81 | 97 | 43 | 36 | 39 | 424 |
| 134825 | F-76 | 12/16/48 | 12/7/48 | -- | 46.4 | 44.0 | 45.2 | 16.5 | 15.0 | 15.6 | 108 | 78 | 94 | 46 | 38 | 41 | 464 |
| 134844 | F-77 | 12/18/48 | 12/7/48 | 1 | 46.2 | 44.4 | 45.5 | 17.5 | 16.3 | 16.8 | 114 | 76 | 98 | 45 | 38 | 41 | 496 |
| 134845 | F-78 | 12/18/48 | 12/13/48 | -- | 44.0 | 42.6 | 43.6 | 15.9 | 14.1 | 15.0 | 115 | 71 | 98 | 40 | 35 | 38 | 432 |
| 134869 | F-79 | 12/22/48 | 12/14/48 | -- | 45.0 | 43.4 | 43.8 | 16.0 | 14.4 | 15.1 | 110 | 73 | 96 | 41 | 35 | 38 | 408 |
| 134951 | F-80 | 12/30/48 | 12/15/48 | -- | 44.2 | 40.4 | 43.2 | 15.9 | 13.6 | 15.0 | 126 | 83 | 98 | 41 | 35 | 38 | 456 |
| 134952 | F-81 | 12/30/48 | 12/22/48 | -- | 44.6 | 42.8 | 43.7 | 16.7 | 15.1 | 15.8 | 116 | 80 | 98 | 40 | 34 | 38 | 424 |
| Current Mill Average: | | | | | 43.9 | | | 15.6 | | | | | 97 | | | 39 | |
| Cumulative Mill Average: | | | | | 43.4 | | | 15.3 | | | | | 103 | | | 40 | |
| Mill Factor, % | | | | | 101.2 | | | 102.0 | | | | | 94.2 | | | 97.5 | |
| Mill Index, %: | | | | | 101.9 | | | 104.0 | | | | | 94.2 | | | 102.6 | |

^a This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.^b This date appeared on the sample; the mill data sheet gives the date of manufacture as November 29, 1948.^c This sample carried no identification as to Mill Code and date of manufacture; however, it was assumed to be Sample F--There were two sheets in the "F" series marked "F-6" and none marked "F-5"; one sheet arbitrarily was treated as "F-5".

TABLE IX

SUMMARY OF INDIVIDUAL TEST LOTS--DECEMBER 1 THROUGH DECEMBER 31, 1948--continued

| te de | Mch. No. | Basis Weight, lb. | | Caliper, points | | JUMBO Mullen Burst, points | | G. E. Puncture, units | | Elmendorf Tear, g./sheet | | | | | | | | | |
|---------------------------|-------------|----------------------|------|--------------------|-------|----------------------------------|------|-----------------------------|------|-----------------------------|------------|----------------|-----|-------|-----|------------------|-----|-----|------------------|
| | | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. | In Max. | Across Min. | Av. | | | | | | |
| Mill G--42-lb. Linerboard | | | | | | | | | | | | | | | | | | | |
| /29/48 | 1 | 44.0 | 42.0 | 43.1 | 14.6 | 12.9 | 13.9 | 123 | 86 | 106 | 39 | 33 | 36 | 432 | 352 | 381 ^a | 432 | 344 | 397 ^a |
| /4/48 ^b | 1 | 43.0 | 41.6 | 42.0 | 15.9 | 14.0 | 14.9 | 120 | 88 | 108 | 35 | 31 | 33 | 368 | 272 | 334 ^a | 416 | 336 | 379 ^a |
| /6/48 | 1 | 44.2 | 42.0 | 42.9 | 14.2 | 12.7 | 13.4 | 128 | 87 | 111 | 36 | 32 | 34 | 376 | 320 | 345 ^a | 456 | 360 | 401 ^a |
| /7/48 | 1 | 44.0 | 42.0 | 43.1 | 15.6 | 14.0 | 14.8 | 131 | 86 | 109 | 40 | 34 | 37 | 432 | 304 | 370 ^a | 472 | 368 | 420 ^a |
| /15/48 | 1 | 45.6 | 44.0 | 44.4 | 16.8 | 15.3 | 16.2 | 118 | 88 | 106 | 43 | 38 | 40 | 472 | 400 | 429 ^a | 464 | 360 | 415 ^a |
| /17/48 | 1 | 44.0 | 42.8 | 43.6 | 16.8 | 15.1 | 15.7 | 134 | 98 | 116 | 41 | 37 | 39 | 440 | 360 | 394 ^a | 464 | 416 | 441 ^a |
| /20/48 | 1 | 44.4 | 41.6 | 43.5 | 15.7 | 14.0 | 15.1 | 117 | 89 | 103 | 43 | 35 | 39 | 424 | 360 | 389 ^a | 464 | 368 | 421 ^a |
| /21/48 | 1 | 43.8 | 41.8 | 42.4 | 15.5 | 14.0 | 14.9 | 126 | 82 | 105 | 36 | 32 | 34 | 400 | 336 | 372 ^a | 448 | 360 | 404 ^a |
| | | 43.1 | | | 14.9 | | | 108 | | | 37 | | | 377 | | | | | 410 |
| | | 42.9 | | | 14.8 | | | 106 | | | 38 | | | 376 | | | | | 409 |
| | | 100.5 | | | 100.7 | | | 101.9 | | | 97.4 | | | 100.3 | | | | | 100.2 |
| | | 100.0 | | | 99.3 | | | 104.9 | | | 97.4 | | | 98.4 | | | | | 98.8 |

readings for one or more specimens which tore beyond the 3/8-inch limit.
sample; the mill data sheet gives the data of manufacture as December 12, 1948.

TABLE IX

SUMMARY OF INDIVIDUAL TEST LOTS--DECEMBER 1 THROUGH DECEMBER 31, 1948--continued

| File No. | Mill Code | Date Recd. | Date Made | Mch. No. | Basis Weight, lb. | | Caliper, points | | JUMBO Mullen Burst, points | | G. E. Puncture, units | | | | | | |
|---------------------------|-----------|------------|-----------------------|----------|-------------------|------|-----------------|------|----------------------------|-------|-----------------------|------|-------|------|------|------|-----|
| | | | | | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. | |
| Mill G--42-lb. Linerboard | | | | | | | | | | | | | | | | | |
| 134739 | G-106 | 12/ 8/48 | 11/29/48 | 1 | 44.0 | 42.0 | 43.1 | 14.6 | 12.9 | 13.9 | 123 | 86 | 106 | 39 | 33 | 36 | 432 |
| 134740 | G-107 | 12/ 8/48 | 12/ 4/48 ^b | 1 | 43.0 | 41.6 | 42.0 | 15.9 | 14.0 | 14.9 | 120 | 88 | 108 | 35 | 31 | 33 | 368 |
| 134750 | G-108 | 12/ 9/48 | 12/ 6/48 | 1 | 44.2 | 42.0 | 42.9 | 14.2 | 12.7 | 13.4 | 128 | 87 | 111 | 36 | 32 | 34 | 376 |
| 134751 | G-109 | 12/ 9/48 | 12/ 7/48 | 1 | 44.0 | 42.0 | 43.1 | 15.6 | 14.0 | 14.8 | 131 | 86 | 109 | 40 | 34 | 37 | 432 |
| 134854 | G-110 | 12/20/48 | 12/15/48 | 1 | 45.6 | 44.0 | 44.4 | 16.8 | 15.3 | 16.2 | 118 | 88 | 106 | 43 | 38 | 40 | 472 |
| 134855 | G-111 | 12/20/48 | 12/17/48 | 1 | 44.0 | 42.8 | 43.6 | 16.8 | 15.1 | 15.7 | 134 | 98 | 116 | 41 | 37 | 39 | 440 |
| 134884 | G-112 | 12/23/48 | 12/20/48 | 1 | 44.4 | 41.6 | 43.5 | 15.7 | 14.0 | 15.1 | 117 | 89 | 103 | 43 | 35 | 39 | 424 |
| 134885 | G-113 | 12/23/48 | 12/21/48 | 1 | 43.8 | 41.8 | 42.4 | 15.5 | 14.0 | 14.9 | 126 | 82 | 105 | 36 | 32 | 34 | 400 |
| Current Mill Average: | | | | | | | 43.1 | | | 14.9 | | | 108 | | | 37 | |
| Cumulative Mill Average: | | | | | | | 42.9 | | | 14.8 | | | 106 | | | 38 | |
| Mill Factor, %: | | | | | | | 100.5 | | | 100.7 | | | 101.9 | | | 97.4 | |
| Mill Index, %: | | | | | | | 100.0 | | | 99.3 | | | 104.9 | | | 97.4 | |

^a This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.^b This date appeared on the sample; the mill data sheet gives the data of manufacture as December 12, 1948.

TABLE X

SUMMARY OF INDIVIDUAL TEST LOTS--DECEMBER 1 THROUGH DECEMBER 31, 1948--continued

| Mch. No. | Basis Weight, lb. | | Caliper, points | | JUMBO Mullen Burst points | | G. E. Puncture, units | | Elmendorf Tear, g./sheet | | Across | | | | | | | |
|--------------------------|----------------------|------|--------------------|------|---------------------------------|-------|-----------------------------|-------|-----------------------------|------|--------|------|-----|-------|------------------|-----|-----|------------------|
| | Max. | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. | Min. | | | | | | |
| Mill H-42-lb. Linerboard | | | | | | | | | | | | | | | | | | |
| '48 2 | 45.4 | 41.6 | 43.8 | 16.3 | 14.2 | 15.1 | 135 | 81 | 105 | 40 | 34 | 39 | 456 | 336 | 407 ^a | 464 | 344 | 423 ^a |
| '48 2 | 43.0 | 41.8 | 42.3 | 16.2 | 14.3 | 15.2 | 133 | 86 | 106 | 39 | 33 | 36 | 440 | 344 | 393 ^a | 480 | 360 | 413 ^a |
| '48 2 | 44.2 | 42.2 | 43.5 | 16.7 | 14.2 | 15.3 | 122 | 88 | 103 | 41 | 34 | 38 | 512 | 360 | 407 | 480 | 332 | 411 ^a |
| '48 2 | 43.0 | 42.0 | 42.4 | 16.0 | 14.5 | 15.3 | 118 | 83 | 104 | 39 | 33 | 35 | 432 | 336 | 388 ^c | 448 | 334 | 424 ^a |
| '48 2 | 42.2 | 41.4 | 42.0 | 15.5 | 14.8 | 15.2 | 120 | 84 | 104 | 41 | 34 | 37 | 440 | 360 | 395 ^a | 456 | 358 | 407 ^a |
| '48 2 | 44.0 | 42.0 | 42.9 | 15.5 | 14.0 | 14.7 | 127 | 83 | 104 | 37 | 31 | 34 | 400 | 320 | 361 | 448 | 332 | 400 ^a |
| '48 2 | 43.6 | 41.0 | 42.2 | 16.4 | 14.9 | 15.7 | 119 | 80 | 102 | 39 | 33 | 36 | 464 | 344 | 403 ^a | 464 | 376 | 431 ^a |
| '48 2 | 44.0 | 42.0 | 43.2 | 15.3 | 13.7 | 14.8 | 121 | 83 | 107 | 42 | 34 | 37 | 416 | 336 | 373 | 440 | 334 | 413 ^a |
| | | | 42.8 | | | 15.2 | | 104 | | | | 37 | | 391 | | | | 415 |
| | | | 43.1 | | | 15.4 | | 104 | | | | 38 | | 402 | | | | 423 |
| | | | 99.3 | | | 98.7 | | 100.0 | | | | 97.4 | | 97.3 | | | | 98.1 |
| | | | 99.3 | | | 101.3 | | 101.0 | | | | 97.4 | | 102.1 | | | | 100 0 |

ings for one or more specimens which tore beyond the 3/8-inch limit.

TABLE X

SUMMARY OF INDIVIDUAL TEST LOTS--DECEMBER 1 THROUGH DECEMBER 31, 1948--continued

| File No. | Mill Code | Date Recd. | Date Made | Mch. No. | Basis Weight, lb. | | | Caliper, points | | | JUMBO Mullen Burst points | | | G. E. Puncture, units | | | Elr In |
|---------------------------|-----------|------------|-----------|----------|-------------------|------|------|-----------------|------|------|---------------------------|------|-----|-----------------------|------|-----|--------|
| | | | | | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. | |
| Mill H--42-lb. Linerboard | | | | | | | | | | | | | | | | | |
| 134690 | H-91 | 12/ 4/48 | 11/29/48 | 2 | 45.4 | 41.6 | 43.8 | 16.3 | 14.2 | 15.1 | 135 | 81 | 105 | 40 | 34 | 39 | 456 |
| 134691 | H-92 | 12/ 4/48 | 11/30/48 | 2 | 43.0 | 41.8 | 42.3 | 16.2 | 14.3 | 15.2 | 133 | 86 | 106 | 39 | 33 | 36 | 440 |
| 134799 | H-93 | 12/13/48 | 12/ 6/48 | 2 | 44.2 | 42.2 | 43.5 | 16.7 | 14.2 | 15.3 | 122 | 88 | 103 | 41 | 34 | 38 | 512 |
| 134800 | H-94 | 12/13/48 | 12/ 7/48 | 2 | 43.0 | 42.0 | 42.4 | 16.0 | 14.5 | 15.3 | 118 | 83 | 104 | 39 | 33 | 35 | 432 |
| 134840 | H-95 | 12/17/48 | 12/13/48 | 2 | 42.2 | 41.4 | 42.0 | 15.5 | 14.8 | 15.2 | 120 | 84 | 104 | 41 | 34 | 37 | 440 |
| 134841 | H-96 | 12/17/48 | 12/13/48 | 2 | 44.0 | 42.0 | 42.9 | 15.5 | 14.0 | 14.7 | 127 | 83 | 104 | 37 | 31 | 34 | 400 |
| 134898 | H-97 | 12/24/48 | 12/20/48 | 2 | 43.6 | 41.0 | 42.2 | 16.4 | 14.9 | 15.7 | 119 | 80 | 102 | 39 | 33 | 36 | 464 |
| 134949 | H-98 | 12/30/48 | 12/21/48 | 2 | 44.0 | 42.0 | 43.2 | 15.3 | 13.7 | 14.8 | 121 | 83 | 107 | 42 | 34 | 37 | 416 |
| Current Mill Average? | | | | | 42.8 | | | 15.2 | | | 104 | | | 37 | | | |
| Cumulative Mill Average: | | | | | 43.1 | | | 15.4 | | | 104 | | | 38 | | | |
| Mill Factor, %: | | | | | 99.3 | | | 98.7 | | | 100.0 | | | 97.4 | | | |
| Mill Index, %: | | | | | 99.3 | | | 101.3 | | | 101.0 | | | 97.4 | | | |

^a This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INDIVIDUAL TEST LOTS--DECEMBER 1 THROUGH DECEMBER 31, 1948--continued

| Mch. No. | Basis Weight, lb. | | Caliper, points | | Mullen Burst, points | | G. E. Puncture, units | | Elmendorf Tear, g./sheet | | | | Across | | | | | |
|----------------------------------|----------------------|------|--------------------|------|-------------------------|------|-----------------------------|------|-----------------------------|------|------|------|--------|-----|------------------|-----|-----|------------------|
| | Max. | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. | Min. | | | | | | |
| <u>Mill I--42-lb. Linerboard</u> | | | | | | | | | | | | | | | | | | |
| 1 | 45.4 | 43.8 | 44.2 | 16.3 | 15.0 | 15.6 | 118 | 87 | 104 | 40 | 35 | 38 | 528 | 296 | 366 ^a | 480 | 400 | 444 ^a |
| 1 | 46.0 | 44.2 | 45.4 | 14.9 | 12.3 | 13.8 | 136 | 97 | 113 | 42 | 38 | 40 | 424 | 352 | 387 | 496 | 424 | 459 ^a |
| 1 | 44.4 | 42.4 | 43.9 | 15.7 | 14.6 | 15.0 | 116 | 91 | 105 | 39 | 36 | 37 | 448 | 320 | 381 ^a | 544 | 384 | 431 ^a |
| - | 44.8 | 44.0 | 44.3 | 16.8 | 15.9 | 16.2 | 112 | 77 | 100 | 40 | 35 | 37 | 400 | 352 | 373 ^a | 472 | 384 | 431 ^a |
| 1 | 45.0 | 43.4 | 44.0 | 15.4 | 14.4 | 14.9 | 118 | 91 | 104 | 41 | 37 | 39 | 432 | 304 | 367 ^a | 496 | 384 | 439 ^a |
| 1 | 45.4 | 43.4 | 44.4 | 15.3 | 13.4 | 14.6 | 119 | 86 | 103 | 39 | 34 | 36 | 432 | 288 | 359 ^a | 480 | 376 | 423 ^a |
| 1 | 46.4 | 44.6 | 45.8 | 15.1 | 13.1 | 13.9 | 122 | 93 | 110 | 40 | 36 | 38 | 440 | 320 | 372 ^a | 480 | 392 | 431 ^a |
| | 44.6 | | | | | 14.9 | | | 105 | | | 38 | | | 372 | | | 437 |

No previous samples submitted.

readings for one or more specimens which tore beyond the $\frac{3}{8}$ -inch limit.

more no identification. As well as was possible, the identification was
 mailing and/or receipt. The manufacturing date and machine number were
 set.

TABLE XI

SUMMARY OF INDIVIDUAL TEST LOTS--DECEMBER 1 THROUGH DECEMBER 31, 1948--continued

| File No. | Mill Code | Date Recd. | Date Made | Mch. No. | Basis Weight, lb. | | Caliper, points | | JUMBO Mullen Burst, points | | G. E. Puncture, units | | | | | | | |
|----------------------------------|------------------|------------|-----------|----------|-------------------|------|-----------------|------|----------------------------|------|-----------------------|------|-----|------|------|----|-----|-----|
| | | | | | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | | | |
| <u>Mill I--42-lb. Linerboard</u> | | | | | | | | | | | | | | | | | | |
| 134753 | I-2 ^b | 12/ 9/48 | 12/ 3/48 | 1 | 45.4 | 43.8 | 44.2 | 16.3 | 15.0 | 15.6 | 118 | 87 | 104 | 40 | 35 | 38 | 528 | 296 |
| 134790 | I-3 ^b | 12/11/48 | 12/ 6/48 | 1 | 46.0 | 44.2 | 45.4 | 14.9 | 12.3 | 13.8 | 136 | 97 | 113 | 42 | 38 | 40 | 424 | 352 |
| 134791 | I-4 ^b | 12/11/48 | 12/ 8/48 | 1 | 44.4 | 42.4 | 43.9 | 15.7 | 14.6 | 15.0 | 116 | 91 | 105 | 39 | 36 | 37 | 448 | 320 |
| 134843 | I-5 ^b | 12/18/48 | 12/13/48 | - | 44.8 | 44.0 | 44.3 | 16.8 | 15.9 | 16.2 | 112 | 77 | 100 | 40 | 35 | 37 | 400 | 352 |
| 134848 | I-6 ^b | 12/20/48 | 12/16/48 | 1 | 45.0 | 43.4 | 44.0 | 15.4 | 14.4 | 14.9 | 118 | 91 | 104 | 41 | 37 | 39 | 432 | 304 |
| 134896 | I-7 | 12/24/48 | 12/20/48 | 1 | 45.4 | 43.4 | 44.4 | 15.3 | 13.4 | 14.6 | 119 | 86 | 103 | 39 | 34 | 36 | 432 | 288 |
| 134912 | I-8 | 12/27/48 | 12/22/48 | 1 | 46.4 | 44.6 | 45.8 | 15.1 | 13.1 | 13.9 | 122 | 93 | 110 | 40 | 36 | 38 | 440 | 320 |

Cumulative Mill Average:

No previous samples submitted.

Mill Factor, %:

Mill Index, %:

103.5

99.3

101.9

100.0

^a This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.^b When received, this sample bore no identification. As well as was possible, the identification was deduced from the dates of mailing and/or receipt. The manufacturing date and machine number were taken from the mill data sheet.

TABLE XII

SUMMARY OF INDIVIDUAL TEST LOTS--DECEMBER 1 THROUGH DECEMBER 31, 1948--continued

| Mch. No. | Basis Weight, lb. | | Caliper, points | | JUMBO Mullen Burst, points | | G. E. Puncture, units | | Elmendorf Tear, g./sheet | | Across | |
|---------------------------|----------------------|------|--------------------|------|----------------------------------|-------|-----------------------------|-------|-----------------------------|-----|--------|------------------|
| | Max. | Min. | Max. | Min. | Max. | Min. | Max. | Min. | In | Av. | Max. | Min. |
| Mill J--42-lb. Linerboard | | | | | | | | | | | | |
| 1 | 44.2 | 41.8 | 42.8 | 15.4 | 14.0 | 14.8 | 133 | 96 | 112 | 35 | 31 | 33 |
| 1 | 44.6 | 41.8 | 43.0 | 15.2 | 13.7 | 14.3 | 134 | 93 | 113 | 34 | 30 | 31 |
| 1 | 43.8 | 42.0 | 42.6 | 15.3 | 13.9 | 14.6 | 132 | 81 | 108 | 35 | 30 | 32 |
| 1 | 43.0 | 40.6 | 42.0 | 15.2 | 13.7 | 14.4 | 122 | 85 | 103 | 32 | 27 | 29 |
| 1 | 44.2 | 42.0 | 43.2 | 15.5 | 13.0 | 14.1 | 132 | 76 | 105 | 36 | 30 | 33 |
| 1 | 44.8 | 42.4 | 43.6 | 15.8 | 13.7 | 14.8 | 121 | 84 | 101 | 38 | 31 | 34 |
| 1 | 44.2 | 42.0 | 43.6 | 16.0 | 14.0 | 15.3 | 118 | 68 | 94 | 37 | 31 | 34 |
| 1 | 45.0 | 42.2 | 43.9 | 15.7 | 13.8 | 14.7 | 112 | 83 | 99 | 35 | 31 | 33 |
| | | | 43.1 | | | 14.6 | | 104 | | | | 32 |
| | | | 42.8 | | | 14.6 | | 105 | | | | 33 |
| | | | 100.7 | | | 100.0 | | 99.0 | | | | 97.0 |
| | | | 100.0 | | | 97.3 | | 101.0 | | | | 84.2 |
| | | | | | | | | | | | | 98.0 |
| | | | | | | | | | | | | 88.5 |
| | | | | | | | | | | | | 101.3 |
| | | | | | | | | | | | | 91.6 |
| | | | | | | | | | | | | 380 |
| | | | | | | | | | | | | 375 |
| | | | | | | | | | | | | 375 ^a |
| | | | | | | | | | | | | 360 ^a |
| | | | | | | | | | | | | 397 ^a |
| | | | | | | | | | | | | 357 ^a |
| | | | | | | | | | | | | 375 ^a |
| | | | | | | | | | | | | 379 ^a |
| | | | | | | | | | | | | 393 ^a |
| | | | | | | | | | | | | 406 ^a |

ags for one or more specimens which tore beyond the 3/8-inch limit.

TABLE XII

SUMMARY OF INDIVIDUAL TEST LOTS--DECEMBER 1 THROUGH DECEMBER 31, 1948--continued

| File No. | Mill Code | Date Recd. | Date Made | Mch. No. | Basis Weight, lb. | | Caliper, points | | JUMBO Mullen Burst, points | | G. E. Puncture, units | | In Elmendorf g./she | | | | | |
|---------------------------|-----------|------------|-----------|----------|-------------------|------|-----------------|------|----------------------------|------|-----------------------|-------|---------------------|------|------|-----|-----|------------------|
| | | | | | Max. | Min. | Max. | Min. | Max. | Min. | Max. | Min. | | Max. | Min. | | | |
| Mill J--42-lb. Linerboard | | | | | | | | | | | | | | | | | | |
| 134712 | J-95 | 12/ 6/48 | 12/ 3/48 | 1 | 44.2 | 41.8 | 42.8 | 15.4 | 14.0 | 14.8 | 133 | 96 | 112 | 35 | 31 | 416 | 280 | 336 ^a |
| 134713 | J-96 | 12/ 6/48 | 12/ 3/48 | 1 | 44.6 | 41.8 | 43.0 | 15.2 | 13.7 | 14.3 | 134 | 93 | 113 | 34 | 30 | 392 | 296 | 348 ^a |
| 134801 | J-97 | 12/13/48 | 12/ 7/48 | 1 | 43.8 | 42.0 | 42.6 | 15.3 | 13.9 | 14.6 | 132 | 81 | 108 | 35 | 30 | 368 | 304 | 333 ^c |
| 134802 | J-98 | 12/13/48 | 12/10/48 | 1 | 43.0 | 40.6 | 42.0 | 15.2 | 13.7 | 14.4 | 122 | 85 | 103 | 32 | 27 | 352 | 232 | 298 |
| 134852 | J-99 | 12/20/48 | 12/17/48 | 1 | 44.2 | 42.0 | 43.2 | 15.5 | 13.0 | 14.1 | 132 | 76 | 105 | 36 | 30 | 440 | 280 | 334 ^a |
| 134853 | J-100 | 12/20/48 | 12/17/48 | 1 | 44.8 | 42.4 | 43.6 | 15.8 | 13.7 | 14.8 | 121 | 84 | 101 | 38 | 31 | 392 | 304 | 358 ^a |
| 134899 | J-101 | 12/24/48 | 12/21/48 | 1 | 44.2 | 42.0 | 43.6 | 16.0 | 14.0 | 15.3 | 118 | 68 | 94 | 37 | 31 | 448 | 304 | 349 |
| 134900 | J-102 | 12/24/48 | 12/21/48 | 1 | 45.0 | 42.2 | 43.9 | 15.7 | 13.8 | 14.7 | 112 | 83 | 99 | 35 | 31 | 448 | 296 | 355 ^a |
| Current Mill Average: | | | | | | | 43.1 | | 14.6 | | | 104 | | 32 | | | | 339 |
| Cumulative Mill Average: | | | | | | | 42.8 | | 14.6 | | | 105 | | 33 | | | | 346 |
| Mill Factor, %: | | | | | | | 100.7 | | 100.0 | | | 99.0 | | 97.0 | | | | 98.0 |
| Mill Index, %: | | | | | | | 100.0 | | 97.3 | | | 101.0 | | 84.2 | | | | 88.5 |

^a This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

TABLE XIII

SUMMARY OF INDIVIDUAL TEST LOTS--DECEMBER 1 THROUGH DECEMBER 31, 1948--continued

| Date | Mch. No. | Basis Weight, lb. | | Caliper, points | | JUMBO Mullen Burst, points | | G. E. Puncture, units | | Elmendorf Tear, g./sheet | | Across | | | | | | | |
|-----------------------------------|----------|-------------------|------|-----------------|------|----------------------------|------|-----------------------|------|--------------------------|------|--------|-------|-----|-----|------------------|-----|-----|------------------|
| | | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. | | | | | | |
| Mill E--44/46-lb. Drum Linerboard | | | | | | | | | | | | | | | | | | | |
| 1/2/48 | 1 | 49.6 | 46.0 | 47.4 | 14.1 | 12.8 | 13.4 | 102 | 76 | 89 | 44 | 40 | 42 | 528 | 384 | 463 ^a | 504 | 384 | 425 ^a |
| 1/21/48 | 1 | 47.2 | 45.4 | 46.3 | 13.7 | 12.1 | 13.1 | 131 | 93 | 113 | 44 | 39 | 41 | 496 | 400 | 437 ^a | 504 | 408 | 461 ^a |
| 1/27/48 | 1 | 50.0 | 47.0 | 48.1 | 14.0 | 13.2 | 13.5 | 125 | 86 | 103 | 46 | 40 | 44 | 512 | 384 | 448 | 504 | 440 | 462 ^a |
| | | | | 47.3 | | | 13.3 | | | 102 | | | 42 | | | 450 | | | 450 |
| | | | | 46.8 | | | 14.2 | | | 95 | | | 42 | | | 440 | | | 446 |
| | | | | 101.1 | | | 93.7 | | | 107.4 | | | 100.0 | | | 102.3 | | | 100.9 |

readings for one or more specimens which tore beyond the 3/8-inch limit.

TABLE XIII

SUMMARY OF INDIVIDUAL TEST LOTS--DECEMBER 1 THROUGH DECEMBER 31, 1948--continued

| File No. | Mill Code | Date Recd. | Date Made | Mch. No. | Basis Weight, lb. | | | Caliper, points | | | JUMBO Mullen Burst, points | | | G. E. Puncture, units | | | In Max. Min. Av. |
|--|-----------|------------|-----------|----------|-------------------|------|------|-----------------|------|------|----------------------------|------|-----|-----------------------|------|-----|------------------|
| | | | | | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. | |
| <u>Mill E--44/46-lb. Drum Linerboard</u> | | | | | | | | | | | | | | | | | |
| 134710 | E-49 | 12/ 6/48 | 12/ 2/48 | 1 | 49.6 | 46.0 | 47.4 | 14.1 | 12.8 | 13.4 | 102 | 76 | 99 | 44 | 40 | 42 | 528 |
| 134897 | E-52 | 12/24/48 | 12/21/48 | 1 | 47.2 | 45.4 | 46.3 | 13.7 | 12.1 | 13.1 | 131 | 93 | 113 | 44 | 39 | 41 | 496 |
| 134950 | E-53 | 12/30/48 | 12/27/48 | 1 | 50.0 | 47.0 | 48.1 | 14.0 | 13.2 | 13.5 | 125 | 86 | 103 | 46 | 40 | 44 | 512 |
| Current Mill Average: | | | | | 47.3 | | | 13.3 | | | 102 | | | 42 | | | |
| Cumulative Mill Average: | | | | | 46.8 | | | 14.2 | | | 95 | | | 42 | | | |
| Mill Factor %: | | | | | 101.1 | | | 93.7 | | | 107.4 | | | 100.0 | | | |

^a This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

As a supplementary part of the Continuous Baseline Study, comparisons of the mill test results with those obtained at The Institute of Paper Chemistry on corresponding samples have been included in this report. As may be noted in Table XIV, the atmospheric conditions used prior to and during the testing period varied considerably.

TABLE XIV

| Mill Code | Preconditioning | | | Conditioning | | |
|--------------|--------------------|----------------|--------------|-----------------|----------------|--------------|
| | R.H., % | Temp., ° F. | Time, hr. | R.H., % | Temp., ° F. | Time, hr. |
| A | No preconditioning | | | 75-86 | 67-81 | -- |
| B | 35-68 | 60-80 | 1/2 | 50 | 70 | 24 |
| C | 62-65 | 72-74 | 48-96 | 50-86 | 70-74 | 24-144 |
| D | 35 | 73-78 | 24 | 55-56 | 73-76 | 24 |
| E | No preconditioning | | | 45-46 | 76-83 | -- |
| F | No preconditioning | | | No conditioning | | |
| G | No preconditioning | | | No conditioning | | |
| H | No preconditioning | | | 50 | 73 | 24 |
| I | No preconditioning | | | 30-70 | 70-78 | -- |
| J | No preconditioning | | | 39-50 | 73 | 1/2-1 |

A summary of the mill comparisons for the current period as compared with the previous period may be seen in Tables XV and XVI, respectively. The comparison for the various mills is given in Tables XVII to XXVI, inclusive, for the 42-lb. liner samples. A comparison of the special drum stock is given in Table XXVII. In all the comparisons

given in Tables XV to XXVII inclusive, the Institute's test values have been used as the reference line.

A comparison of the test data in Tables XV and XVI indicates that in the majority of cases there is good agreement between the mill data and Institute data. As may be seen in Table XVI, the maximum variation in the average basis weight between the results of the Institute and those of a given mill on corresponding samples is 2% for the current period. In regard to caliper for the current period, the results for all mills are lower than those for the Institute, with the exception of Mills B, E, and I whose results are the same and Mill J whose results are higher. None of the differences appear to be significantly large. It may be observed on reviewing the bursting strength results that the averages for Mills C, D, E and H are higher than those for the Institute, whereas the averages for Mills A, F, G and I are lower and those for Mills B and J are the same. In this case, too, none of the differences appear to be significantly large. It may be noted in Table XV that the G. E. puncture results for Mills A, F, H and J are higher than those for the Institute while those for Mills B, C, and G are the same and those for Mill E are lower. The average differences encountered for Mills A and E appear to be significantly large. It may be seen in Table XV that the average differences between Institute and mill data encountered in connection with the machine direction tear results are positive for Mills A, C, I and J and negative for Mills B, D, E, F, G and H. The variations for Mills B, D, and I are especially large. With regard to the across-machine direction tear results, it may be noted that the average differences

for Mills A, C, F, H, I and J are positive and those for Mills B, D, E and G are negative. The variation obtained for Mill I is especially large.

The data in Table XVI also show the comparison of the average per cent differences between mill and Institute test results for the past three periods. It may be noted that the maximum variation in basis weight during this time amounts to approximately 3%. The maximum average variation in the basis weight results for the current period is commensurate with the variations for the preceding periods. It may also be noted that the variations encountered in the caliper, bursting strength, and G. E. puncture values for each mill for the current period are approximately the same as for the previous period.

TABLE XV
SUMMARY OF TEST RESULT COMPARISONS

| Average Mill and Institute Results | Mills* | | | | | | | | | |
|---------------------------------------|--------|------|------|------|------|------|------|------|------|------|
| | A | B | C | D | E | F | G | H | I | J |
| No. Samples Compared | 6 | 13 | 6 | 15 | 2 | 11 | 8 | 8 | 7 | 8 |
| Basis Weight | | | | | | | | | | |
| Institute | 43.2 | 43.6 | 42.8 | 43.2 | 44.8 | 43.9 | 43.1 | 42.8 | 44.6 | 43.1 |
| Mill | 42.4 | 43.2 | 42.0 | 42.9 | 44.3 | 43.9 | 42.6 | 43.1 | 43.9 | 42.7 |
| Av. difference** | -0.8 | -0.4 | -0.8 | -0.3 | -0.5 | 0.0 | -0.5 | +0.3 | -0.7 | -0.4 |
| Max. difference*** | -1.6 | -0.8 | -1.1 | -0.8 | -0.7 | ±0.9 | -1.6 | +1.2 | -1.2 | -0.8 |
| Caliper | | | | | | | | | | |
| Institute | 14.4 | 14.6 | 14.3 | 15.5 | 13.8 | 15.6 | 14.9 | 15.2 | 14.9 | 14.6 |
| Mill | 14.1 | 14.6 | 14.0 | 15.2 | 13.8 | 14.9 | 14.3 | 15.0 | 14.9 | 14.8 |
| Av. difference** | -0.3 | 0.0 | -0.3 | -0.3 | 0.0 | -0.7 | -0.6 | -0.2 | 0.0 | +0.2 |
| Max. difference*** | -1.4 | ±0.2 | -0.5 | +1.5 | 0.0 | -1.2 | -0.9 | -0.6 | +0.3 | +0.5 |
| Bursting Strength | | | | | | | | | | |
| Institute | 106 | 107 | 101 | 100 | 111 | 97 | 108 | 104 | 105 | 104 |
| Mill | 104 | 107 | 103 | 101 | 114 | 95 | 104 | 105 | 102 | 104 |
| Av. difference** | -2 | 0 | +2 | +1 | +3 | -2 | -4 | +1 | -3 | 0 |
| Max. difference*** | -8 | ±3 | +5 | -9 | +4 | -6 | -8 | +5 | -6 | -7 |
| G. E. Puncture | | | | | | | | | | |
| Institute | 36 | 35 | 37 | 35 | 34 | 39 | 37 | 37 | 38 | 32 |
| Mill | 41 | 35 | 37 | -- | 31 | 41 | 37 | 38 | -- | 33 |
| Av. difference** | +5 | 0 | 0 | -- | -3 | +2 | 0 | +1 | -- | +1 |
| Max. difference*** | +11 | +2 | -5 | -- | -5 | +4 | -4 | +4 | -- | +3 |
| Tearing Strength, in | | | | | | | | | | |
| Institute | 385 | 360 | 360 | 382 | 387 | 384 | 377 | 391 | 372 | 339 |
| Mill | 405 | 328 | 370 | 345 | 366 | 380 | 362 | 379 | 445 | 342 |
| Av. difference** | +20 | -32 | +10 | -37 | -21 | -4 | -15 | -12 | +73 | +3 |
| Max. difference*** | +53 | -44 | +32 | -64 | -22 | -42 | -47 | -21 | +84 | -44 |
| Tearing Strength, across | | | | | | | | | | |
| Institute | 417 | 394 | 413 | 408 | 418 | 421 | 410 | 415 | 437 | 380 |
| Mill | 440 | 364 | 427 | 390 | 394 | 429 | 389 | 424 | 529 | 396 |
| Av. difference** | +23 | -30 | +14 | -18 | -24 | +8 | -21 | +9 | +92 | +16 |
| Max. difference*** | +68 | -46 | +36 | -45 | -26 | +27 | -42 | +26 | +111 | +44 |

* Comparison based on averages involves only those samples on which mill test data were submitted.

** Average difference is the difference between the Institute mill average and the mill average based on mill test data.

*** Maximum difference encountered in comparing the Institute average and the mill average for any sample submitted by that particular mill.

TABLE XVI

SUMMARY OF TEST RESULTS--COMPARISON BY PERIODS

| | Average Difference, per cent | | | | | |
|----------------|------------------------------|---------|----------------------|-------------------|----------------------------|--------------------------------|
| | Basis Weight | Caliper | Bursting Strength | G. E. Puncture | Tearing Strength, In | Tearing Strength, Across |
| Mill A | | | | | | |
| Current period | -2 | -2 | -2 | +14 | +5 | +6 |
| 17th period | -0.5 | -0.7 | -0.9 | +14 | +9 | +4 |
| 16th period | -0.7 | -2 | +2 | +18 | -3 | -4 |
| Mill B | | | | | | |
| Current period | -0.9 | 0 | 0 | 0 | -9 | -8 |
| 17th period | -0.7 | 0 | -0.9 | +3 | -3 | -4 |
| 16th period | -0.7 | 0 | 0 | +3 | -3 | -3 |
| Mill C | | | | | | |
| Current period | -2 | -2 | +2 | 0 | +3 | +3 |
| 17th period | -2 | -1 | +4 | +13 | +3 | +5 |
| 16th period | -0.9 | -2 | +3 | +14 | +5 | +6 |
| Mill D | | | | | | |
| Current period | -0.7 | -2 | +1 | -- | -10 | -4 |
| 17th period | 0 | -0.6 | -2 | -- | -10 | -0.2 |
| 16th period | -3 | -4 | -1 | -- | -12 | -1 |
| Mill E | | | | | | |
| Current period | -1 | 0 | +3 | -9 | -5 | -6 |
| 17th period | -- | -- | -- | -- | -- | -- |
| 16th period | -3 | -4 | 0 | -14 | -28 | -18 |
| Mill F | | | | | | |
| Current period | 0 | -4 | -2 | +5 | -1 | +2 |
| 17th period | -0.9 | -3 | -1 | +5 | -1 | +1 |
| 16th period | -0.2 | -4 | -4 | +14 | +7 | +11 |
| Mill G | | | | | | |
| Current period | -1 | -4 | -4 | 0 | -4 | -5 |
| 17th period | +0.7 | -3 | 0 | +8 | +3 | +0.2 |
| 16th period | 0 | -4 | -6 | +9 | +7 | +6 |
| Mill H | | | | | | |
| Current period | +0.7 | -1 | +1 | +3 | -3 | +2 |
| 17th period | +0.9 | -1 | +1 | +6 | -2 | +1 |
| 16th period | +0.7 | -3 | +0.9 | +9 | -2 | +3 |
| Mill I | | | | | | |
| Current period | -2 | 0 | -3 | -- | +20 | +21 |
| 17th period | -- | -- | -- | -- | -- | -- |
| 16th period | -- | -- | -- | -- | -- | -- |
| Mill J | | | | | | |
| Current period | -0.9 | +1 | 0 | +3 | +0.9 | +4 |
| 17th period | -2 | 0 | -4 | 0 | -0.6 | +3 |
| 16 period | -1 | -1 | -5 | +4 | -16 | -12 |

SUMMARY OF INDIVIDUAL TEST LOTS--DECEMBER 1 THROUGH DECEMBER 31, 1948

TABLE XVII

Institute Data versus Mill Data

| Basis Weight, lb. | IPC Mill Diff. | Caliper, points | JUMBO | | | | G. E. | | | | Elmendorf Tear, | | | | | | |
|---------------------------|----------------|--------------------|----------------|-------|--------|----------------|----------------|-------|----------------|----------|-----------------|------------------|--------|-----|------------------|-----|-----|
| | | | Mullen Burst, | | points | IPC Mill Diff. | Puncture, | | IPC Mill Diff. | g./sheet | | IPC Mill Diff. | Across | | | | |
| | | | IPC Mill Diff. | Diff. | | | IPC Mill Diff. | units | | In | IPC Mill Diff. | | | | | | |
| Mill A--42-lb. Linerboard | | | | | | | | | | | | | | | | | |
| 43.0 | 42.8 | -0.2 | 13.7 | 13.8 | +0.1 | 104 | 103 | -1 | 34 | 38 | +4 | 357 ^a | 342 | -15 | 404 ^a | 387 | -17 |
| 42.0 | 41.8 | -0.2 | 13.1 | 13.6 | +0.5 | 107 | 105 | -2 | 32 | 35 | +3 | 357 ^a | 334 | -23 | 384 ^a | 365 | -19 |
| 43.0 | 42.5 | -0.5 | 13.5 | 14.1 | -1.4 | 97 | 104 | +7 | 35 | 46 | +11 | 402 ^a | 453 | +51 | 410 ^a | 478 | +68 |
| 43.4 | 42.4 | -1.0 | 14.7 | 14.4 | -0.3 | 112 | 104 | -8 | 37 | 44 | +7 | 406 ^a | 451 | +45 | 425 ^a | 488 | +63 |
| 43.6 | 42.7 | -0.9 | 14.7 | 14.6 | -0.1 | 108 | 103 | -5 | 39 | 43 | +4 | 393 ^a | 446 | +53 | 433 ^a | 465 | +32 |
| 44.1 | 42.5 | -1.6 | 14.6 | 14.1 | -0.5 | 109 | 105 | -4 | 40 | 41 | +1 | 397 ^a | 402 | +5 | 447 ^a | 455 | +8 |
| 43.2 | 42.4 | -0.8 | 14.4 | 14.1 | -0.3 | 106 | 104 | -2 | 36 | 41 | +5 | 385 | 405 | +20 | 417 | 440 | +23 |

TABLE XVIII

| Mill B--42-lb. Linerboard | | | | | | | | | | | | | | | | | |
|---------------------------|------|------|------|------|------|-----|-----|----|----|----|----|------------------|-----|-----|------------------|-----|-----|
| 43.5 | 43.4 | -0.1 | 15.0 | 15.0 | 0.0 | 107 | 107 | 0 | 34 | 34 | 0 | 355 | 317 | -38 | 381 | 355 | -26 |
| 44.3 | 44.1 | -0.2 | 15.7 | 15.9 | +0.2 | 107 | 104 | -3 | 33 | 34 | +1 | 376 ^a | 332 | -44 | 387 ^a | 368 | -19 |
| 44.4 | 44.6 | -0.8 | 15.7 | 15.5 | -0.2 | 104 | 107 | +3 | 36 | 37 | +1 | 382 ^a | 365 | -17 | 435 ^a | 395 | -40 |
| 44.5 | 44.1 | -0.4 | 15.2 | 15.2 | 0.0 | 105 | 104 | -1 | 34 | 36 | +2 | 335 ^a | 327 | -8 | 389 ^a | 365 | -24 |
| 43.7 | 43.2 | -0.5 | 15.4 | 15.2 | -0.2 | 105 | 104 | -1 | 34 | 33 | -1 | 329 | 287 | -42 | 370 ^a | 324 | -46 |
| 43.3 | 44.5 | -0.8 | 15.1 | 15.0 | -0.1 | 104 | 104 | 0 | 35 | 37 | +2 | 367 ^a | 337 | -30 | 406 ^a | 371 | -29 |
| 43.3 ^b | 43.0 | -0.3 | 15.0 | 15.2 | +0.2 | 105 | 104 | -1 | 33 | 33 | 0 | 350 | 310 | -40 | 367 ^a | 345 | -22 |
| 43.6 | 43.0 | -0.6 | 14.0 | 14.1 | +0.1 | 105 | 105 | 0 | 37 | 36 | -1 | 361 | 333 | -28 | 402 ^a | 374 | -28 |
| 42.5 | 42.3 | -0.2 | 14.0 | 14.0 | 0.0 | 115 | 116 | +1 | 35 | 35 | 0 | 360 ^a | 328 | -32 | 405 ^a | 374 | -31 |
| 43.2 | 42.5 | -0.7 | 14.3 | 14.5 | +0.2 | 110 | 107 | -3 | 34 | 34 | 0 | 365 ^a | 337 | -28 | 399 ^a | 375 | -24 |
| 42.2 | 42.1 | -0.1 | 13.5 | 13.3 | -0.2 | 108 | 108 | 0 | 33 | 34 | +1 | 364 ^a | 327 | -37 | 394 ^a | 358 | -36 |
| 42.4 | 42.1 | -0.3 | 13.5 | 13.5 | 0.0 | 109 | 111 | +2 | 34 | 33 | -1 | 359 ^a | 324 | -35 | 395 ^a | 359 | -36 |
| 42.6 | 42.3 | -0.3 | 13.7 | 13.8 | +0.1 | 106 | 104 | -2 | 36 | 35 | -1 | 374 ^a | 339 | -35 | 393 ^a | 365 | -28 |
| 43.6 | 43.2 | -0.4 | 14.6 | 14.6 | 0.0 | 107 | 107 | 0 | 35 | 35 | 0 | 360 | 328 | -32 | 394 | 364 | -30 |

ings for one or more specimens which tore beyond the 3/8-inch limit.
ons contained a scum mark; a one-quarter-inch square of board was missing.
" data are calculated from the totals of the individual readings.

SUMMARY OF INDIVIDUAL TEST LOTS-- DECEMBER 1 THROUGH DECEMBER 31, 1948

Current Mill Average:

TABLE XVII

Current Mill ..verag:

^b One of the basis weight specimens contained a scum mark; a one-quarter-inch square of board was missing,

Note: All "current mill average" data are calculated from the totals of the individual readings.

SUMMARY OF INDIVIDUAL TEST LOTS--DECEMBER 1 THROUGH DECEMBER 31, 1948--continued

[illegible]

readings for one or more specimens which tore beyond the $3/8$ -inch limit.

"average" data are calculated from the totals of the individual readings.

SUMMARY OF INDIVIDUAL TEST LOTS--DECEMBER 1 THROUGH DECEMBER 31, 1948--continued
Institute Data versus Mill Data

^a This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

TABLE XX
SUMMARY OF INDIVIDUAL TEST LOTS--DECEMBER 1 THROUGH DECEMBER 31, 1948--continued

| Institute Data versus Mill Data | | | | | | | | | |
|---------------------------------|------------|--------------------|------------|----------------------------------|------------|-----------------------------|------------|-----------------------------|--------------------------|
| Basis Weight, lb. | | Caliper, points | | JUMBO Mullen Burst, points | | G. E. Puncture, units | | Elmendorf Tear, g./sheet | |
| IPC | Mill Diff. | IPC | Mill Diff. | IPC | Mill Diff. | IPC | Mill Diff. | In Mill Diff. | Across IPC Mill Diff. |
| Mill D--42-lb. Linerboard | | | | | | | | | |
| 43.0 | 43.2 +0.2 | 15.4 | 15.7 -0.7 | 102 | 104 +2 | 38 | | 392 | 417 ^a |
| 43.2 | 43.8 +0.6 | 16.8 | 16.0 -0.8 | 99 | 100 +1 | 36 | | 395 | 438 ^a |
| 43.8 | 43.9 +0.1 | 16.4 | 15.8 -0.6 | 101 | 106 +5 | 37 | | 361 | 416 ^a |
| 43.8 | 43.0 -0.8 | 16.5 | 15.8 -0.7 | 98 | 99 +1 | 37 | | 370 | 393 ^a |
| 43.5 | 43.1 -0.4 | 16.3 | 16.1 -0.2 | 107 | 103 -4 | 35 | | 350 | 391 ^a |
| 42.9 | 42.6 -0.3 | 15.8 | 15.7 -0.1 | 99 | 101 +2 | 32 | | 331 | 378 ^a |
| 42.5 | 42.1 -0.4 | 15.4 | 15.7 +0.3 | 102 | 102 0 | 33 | | 334 | 377 ^a |
| 42.3 | 42.4 +0.1 | 14.2 | 15.7 +1.5 | 109 | 100 -9 | 39 | | 347 | 411 |
| 43.8 | 43.0 -0.8 | 15.8 | 15.7 -0.1 | 103 | 103 0 | 35 | | 335 | 353 ^a |
| 43.4 | 42.8 -0.6 | 15.9 | 15.7 -0.2 | 97 | 102 +5 | 37 | | 336 | 368 ^a |
| 43.7 | 43.1 -0.6 | 14.7 | 14.8 +0.1 | 101 | 99 -2 | 36 ^c | | 328 | 360 ^a |
| 43.0 | 42.7 -0.3 | 14.8 | 14.8 0.0 | 95 | 94 -1 | 36 | | 332 | 359 ^a |
| 42.4 | 42.3 -0.1 | 14.6 | 13.9 -0.7 | 94 | 98 +4 | 34 | | 325 | 335 ^a |
| 43.1 | 42.3 -0.8 | 14.9 | 13.8 -1.1 | 98 | 99 +1 | 34 | | 321 | 372 ^a |
| 43.1 | 42.7 -0.4 | 14.2 | 13.5 -0.7 | 99 | 97 -2 | 32 | | 322 | 369 ^a |
| 43.2 | 42.9 -0.3 | 15.5 | 15.2 -0.3 | 100 | 101 +1 | 35 | | 345 | 382 |
| | | | | | | | | 37 | 408 |
| | | | | | | | | | 390 |
| | | | | | | | | | 18 |

readings for one or more specimens which tore beyond the 3/8-inch limit.
ample; the mill data sheet gives the date of manufacture as December 4, 1948.
of only 22 readings instead of 24.

"age" data are calculated from the totals of the individual readings.

TABLE XX

SUMMARY OF INDIVIDUAL TEST LOTS--DECEMBER 1 THROUGH DECEMBER 31, 1948--continued

Institute Data versus Mill Data

| File No. | Mill Code | Date Made | Mch. No. | Basis Weight, lb. | | Caliper, points | | JUMBO Mullen Burst, points | | G. E. Puncture, units | Elmendorf In Mill D. | | | | |
|---------------------------|-----------|-----------------------|----------|-------------------|------------|-----------------|------------|----------------------------|------------|-----------------------|----------------------|-----|-----------------|------------------|-----|
| | | | | IPC | Mill Diff. | IPC | Mill Diff. | IPC | Mill Diff. | | | IPC | Mill Diff. | | |
| Mill D--42-lb. Linerboard | | | | | | | | | | | | | | | |
| 134665 | D-61 | 11/27/48 | 4 | 43.0 | 43.2 | +0.2 | 15.4 | 15.7 | -0.7 | 102 | 104 | +2 | 38 | 417 ^a | 392 |
| 134666 | D-62 | 11/28/48 | 4 | 43.2 | 43.8 | +0.6 | 16.8 | 16.0 | -0.8 | 99 | 100 | +1 | 36 | 438 ^a | 395 |
| 134667 | D-63 | 11/29/48 | 4 | 43.8 | 43.9 | +0.1 | 16.4 | 15.8 | -0.6 | 101 | 106 | +5 | 37 | 416 ^a | 361 |
| 134714 | D-64 | 11/30/48 | 4 | 43.8 | 43.0 | -0.8 | 16.5 | 15.8 | -0.7 | 98 | 99 | +1 | 37 | 393 ^a | 370 |
| 134743 | D-65 | 12/ 5/48 ^b | 4 | 43.5 | 43.1 | -0.4 | 16.3 | 16.1 | -0.2 | 107 | 103 | -4 | 35 | 391 ^a | 350 |
| 134744 | D-66 | 12/ 6/48 | 4 | 42.9 | 42.6 | -0.3 | 15.8 | 15.7 | -0.1 | 99 | 101 | +2 | 32 | 378 ^a | 331 |
| 134779 | D-67 | 12/ 7/48 | 4 | 42.5 | 42.1 | -0.4 | 15.4 | 15.7 | +0.3 | 102 | 102 | 0 | 33 | 377 ^a | 334 |
| 134789 | D-68 | 12/ 8/48 | 4 | 42.3 | 42.4 | +0.1 | 14.2 | 15.7 | +1.5 | 109 | 100 | -9 | 39 | 411 | 347 |
| 134823 | D-69 | 12/12/48 | 4 | 43.8 | 43.0 | -0.8 | 15.8 | 15.7 | -0.1 | 103 | 103 | 0 | 35 | 353 ^a | 335 |
| 134824 | D-70 | 12/13/48 | 4 | 43.4 | 42.8 | -0.6 | 15.9 | 15.7 | -0.2 | 97 | 102 | +5 | 37 | 368 ^a | 336 |
| 134866 | D-71 | 12/17/48 | 4 | 43.7 | 43.1 | -0.6 | 14.7 | 14.8 | +0.1 | 101 | 99 | -2 | 36 ^c | 360 ^a | 328 |
| 134867 | D-72 | 12/18/48 | 4 | 43.0 | 42.7 | -0.3 | 14.8 | 14.8 | 0.0 | 95 | 94 | -1 | 36 | 359 ^a | 332 |
| 134868 | D-73 | 12/19/48 | 4 | 42.4 | 42.3 | -0.1 | 14.6 | 13.9 | -0.7 | 94 | 98 | +4 | 34 | 335 ^a | 325 |
| 134883 | D-74 | 12/20/48 | 4 | 43.1 | 42.3 | -0.8 | 14.9 | 13.8 | -1.1 | 98 | 99 | +1 | 34 | 372 ^a | 321 |
| 134901 | D-75 | 12/21/48 | 4 | 43.1 | 42.7 | -0.4 | 14.2 | 13.5 | -0.7 | 99 | 97 | -2 | 32 | 369 ^a | 322 |
| Current Mill Average | | | | 43.2 | 42.9 | -0.3 | 15.5 | 15.2 | -0.3 | 100 | 101 | +1 | 35 | 382 | 345 |

^a This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.^b This date appeared on the sample; the mill data sheet gives the date of manufacture as December 4, 1948.^c This value is the average of only 22 readings instead of 24.

Note: All "current mill average" data are calculated from the totals of the individual readings.

TABLE XXI
SUMMARY OF INDIVIDUAL TEST LOTS--DECEMBER 1 THROUGH DECEMBER 31, 1948--continued
Institute Data versus Mill Data

| IPC | Basis Weight, lb. | Caliper, points | IPC | Mill | Diff. | IPC | Mill | Diff. | JUMBO | | IPC | Mill | Diff. | G. E. | | IPC | Mill | Diff. | Elmendorf Tear, | | IPC | Mill | Diff. |
|------|----------------------|--------------------|------|------|-------|-----|------|-------|-------------------------|-------|-----|------------------|-------|--------------------|------------------|-----|------|-------|-----------------|--------|-----|------|-------|
| | | | | | | | | | Mullen Burst, points | units | | | | Puncture, units | g./sheet | | | | In | Across | | | |
| 45.0 | 44.6 | -0.4 | 13.8 | 13.8 | 0.0 | 108 | 110 | +2 | 34 | 32 | -2 | 383 | 361 | -22 | 401 ^a | 375 | -26 | | | | | | |
| 44.7 | 44.0 | -0.7 | 13.7 | 13.7 | 0.0 | 113 | 117 | +4 | 35 | 30 | -5 | 391 ^a | 371 | -20 | 435 ^a | 412 | -23 | | | | | | |
| 44.8 | 44.3 | -0.5 | 13.8 | 13.8 | 0.0 | 111 | 114 | +3 | 34 | 31 | -3 | 387 | 366 | -21 | 418 | 394 | -24 | | | | | | |

TABLE XXII

| Mill F--42-lb. Linerboard | | | | | | | | | | | | | | | | | |
|---------------------------|------|------|------|------|------|-----|----|----|----|----|----|------------------|-----|-----|------------------|-----|-----|
| 43.9 | 43.3 | -0.6 | 16.2 | 15.8 | -0.4 | 102 | 98 | -4 | 39 | 43 | +4 | 389 ^a | 347 | -42 | 441 ^a | 422 | -19 |
| 44.4 | 45.2 | +0.8 | 16.3 | 15.1 | -1.2 | 100 | 96 | -4 | 39 | 42 | +3 | 380 ^a | 376 | -4 | 427 ^a | 426 | -1 |
| 42.1 | 42.9 | +0.8 | 15.5 | 14.8 | -0.7 | 99 | 93 | -6 | 38 | 39 | +1 | 358 | 361 | +3 | 403 ^a | 410 | +7 |
| 43.0 | 43.9 | +0.9 | 14.8 | 14.5 | -0.3 | 93 | 93 | 0 | 36 | 40 | +4 | 346 ^a | 375 | +29 | 412 ^a | 434 | +22 |
| 44.5 | 44.8 | +0.3 | 15.9 | 14.8 | -1.1 | 97 | 96 | -1 | 39 | 42 | +3 | 381 | 379 | -2 | 417 ^a | 444 | +27 |
| 45.2 | 45.1 | -0.1 | 15.6 | 15.1 | -0.5 | 94 | 93 | -1 | 41 | 43 | +2 | 404 ^a | 427 | +23 | 427 ^a | 453 | +26 |
| 45.5 | 45.4 | -0.1 | 16.8 | 15.8 | -1.0 | 98 | 96 | -2 | 41 | 45 | +4 | 431 ^a | 423 | -8 | 447 ^a | 468 | +21 |
| 43.6 | 43.0 | -0.6 | 15.0 | 14.3 | -0.7 | 98 | 93 | -5 | 38 | 42 | +4 | 388 ^a | 379 | -9 | 409 ^a | 420 | +11 |
| 43.8 | 42.9 | -0.9 | 15.1 | 14.2 | -0.9 | 96 | 97 | +1 | 38 | 38 | 0 | 379 ^a | 397 | +18 | 423 ^a | 436 | +13 |
| 43.2 | 43.2 | 0.0 | 15.0 | 14.1 | -0.9 | 98 | 98 | 0 | 38 | 38 | 0 | 386 ^a | 364 | -22 | 409 ^a | 413 | +4 |
| 43.7 | 43.6 | -0.1 | 15.8 | 15.0 | -0.8 | 98 | 94 | -4 | 38 | 38 | 0 | 381 ^a | 347 | -34 | 412 ^a | 398 | -14 |
| 43.9 | 43.9 | 0.0 | 15.6 | 14.9 | -0.7 | 97 | 95 | -2 | 39 | 41 | +2 | 384 | 380 | -4 | 421 | 429 | +8 |

Readings for one or more specimens which tore beyond the 3/8-inch limit.
Example; the mill data sheet gives the date of manufacture as November 29, 1948.
Specification as to Mill Code and date of manufacture; however, it was assumed to
sheets in the "F" series marked "F-6" and none marked "F-5"; one sheet
"F-5."

Age data are calculated from the totals of the individual readings.

TABLE XXI

SUMMARY OF INDIVIDUAL TEST LOTS--DECEMBER 1 THROUGH DECEMBER 31, 1948--continued
Institute Data versus Mill Data

| File No. | Mill Code | Date Made | Mch. No. | Basis Weight, lb. | | Caliper, points | | JUMBO | | G. E. | | Elmer G./In | | | | |
|-----------------------|-----------|-----------|----------|-------------------|------------|-----------------|------------|----------------------|-----------------|-------|------------|-------------|----|----|------------------|-----|
| | | | | IPC | Mill Diff. | IPC | Mill Diff. | Mullen Burst, points | Puncture, units | IPC | Mill Diff. | | | | | |
| 134781 | E-50 | 12/7/48 | 1 | 45.0 | -0.4 | 13.8 | 13.8 | 0.0 | 108 | 110 | +2 | 34 | 32 | -2 | 383 | 361 |
| 134842 | E-51 | 12/13/48 | 1 | 44.7 | -0.7 | 13.7 | 13.7 | 0.0 | 113 | 117 | +4 | 35 | 30 | -5 | 391 ^a | 371 |
| Current Mill Average: | | | | 44.8 | -0.5 | 13.8 | 13.8 | 0.0 | 111 | 114 | +3 | 34 | 31 | -3 | 387 | 366 |

TABLE XXII

| Mill F--42-lb. Linerboard | | | | | | | | | | | | | | | | |
|---------------------------|-------------------|-----------------------|---|------|------|------|------|------|-----|----|----|----|----|----|------------------|-----|
| 134664 | F-71 | 11/15/48 | - | 43.9 | -0.6 | 16.2 | 15.8 | -0.4 | 102 | 98 | -4 | 39 | 43 | +4 | 389 ^a | 347 |
| 134694 | F-72 | 11/26/48 | - | 44.4 | +0.8 | 16.3 | 15.1 | -1.2 | 100 | 96 | -4 | 39 | 42 | +3 | 380 ^a | 376 |
| 134711 | F-73 | 11/30/48 ^b | - | 42.1 | +0.8 | 15.5 | 14.8 | -0.7 | 99 | 93 | -6 | 38 | 39 | +1 | 358 | 361 |
| 134752 | F-74 ^c | 12/2/48 | - | 43.0 | +0.9 | 14.8 | 14.5 | -0.3 | 93 | 93 | 0 | 36 | 40 | +4 | 346 ^a | 375 |
| 134780 | F-75 | 12/3/48 | - | 44.5 | +0.3 | 15.9 | 14.8 | -1.1 | 97 | 96 | -1 | 39 | 42 | +3 | 381 | 379 |
| 134825 | F-76 | 12/7/48 | - | 45.2 | -0.1 | 15.6 | 15.1 | -0.5 | 94 | 93 | -1 | 41 | 43 | +2 | 404 ^a | 427 |
| 134844 | F-77 | 12/7/48 | 1 | 45.5 | -0.1 | 16.8 | 15.8 | -1.0 | 98 | 96 | -2 | 41 | 45 | +4 | 431 ^a | 423 |
| 134845 | F-78 | 12/13/48 | - | 43.6 | -0.6 | 15.0 | 14.3 | -0.7 | 98 | 93 | -5 | 38 | 42 | +4 | 388 ^a | 379 |
| 134869 | F-79 | 12/14/48 | - | 43.8 | -0.9 | 15.1 | 14.2 | -0.9 | 96 | 97 | +1 | 38 | 38 | 0 | 379 ^a | 397 |
| 134951 | F-80 | 12/15/48 | - | 43.2 | 0.0 | 15.0 | 14.1 | -0.9 | 98 | 98 | 0 | 38 | 38 | 0 | 386 ^a | 364 |
| 134952 | F-81 | 12/22/48 | - | 43.7 | -0.1 | 15.8 | 15.0 | -0.8 | 98 | 94 | -4 | 38 | 38 | 0 | 381 ^a | 347 |
| Current Mill Average: | | | | 43.9 | 0.0 | 15.6 | 14.9 | -0.7 | 97 | 95 | -2 | 39 | 41 | +2 | 384 | 380 |

^a This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

^b This date appeared on the sample; the mill data sheet gives the date of manufacture as November 29, 1948.

^c This sample carried no identification as to Mill Code and date of manufacture; however, it was assumed to be F-74. There were two sheets in the "F" series marked "F-6" and none marked "F-5"; one sheet arbitrarily was treated as "F-5."

Note: All "current mill average" data are calculated from the totals of the individual readings.

TABLE XXIII

SUMMARY OF INDIVIDUAL TEST LOTS--DECEMBER 1 THROUGH DECEMBER 31, 1948--continued
Institute Data versus Mill Data

| File No. | Mill Code | Date Made | Mch. No. | Basis Weight, lb. | | Caliper, points | | Jumbo | | G. E. | | Elmendorf g./shk In | | | | | |
|--------------------------|-----------|-----------------------|----------|-------------------|------------|-----------------|------------|-------|------------|-----------------|----------------|---------------------|----|----|------------------|-----|-----|
| | | | | IPC | Mill Diff. | IPC | Mill Diff. | IPC | Mill Diff. | Puncture, units | IPC Mill Diff. | | | | | | |
| Mill G-42-lb. Linerboard | | | | | | | | | | | | | | | | | |
| 134739 | G-106 | 11/29/48 | 1 | 43.1 | 42.0 | -1.1 | 13.9 | 13.4 | -0.5 | 106 | 99 | -7 | 36 | 38 | 381 ^a | 334 | -47 |
| 134740 | G-107 | 12/ 4/48 ^b | 1 | 42.0 | 40.4 | -1.6 | 14.9 | 14.3 | -0.6 | 108 | 100 | -8 | 33 | 31 | 334 ^a | 304 | -30 |
| 134750 | G-108 | 12/ 6/48 | 1 | 42.9 | 42.4 | -0.5 | 13.4 | 13.0 | -0.4 | 111 | 104 | -7 | 34 | 36 | 345 ^a | 360 | +15 |
| 134751 | G-109 | 12/ 7/48 | 1 | 43.1 | 43.3 | +0.2 | 14.8 | 14.2 | -0.6 | 109 | 108 | -1 | 37 | 38 | 370 ^a | 377 | +7 |
| 134854 | G-110 | 12/15/48 | 1 | 44.4 | 44.0 | -0.4 | 16.2 | 15.3 | -0.9 | 106 | 103 | -3 | 40 | 41 | 429 ^a | 400 | -29 |
| 134855 | G-111 | 12/17/48 | 1 | 43.6 | 43.8 | +0.2 | 15.7 | 15.3 | -0.4 | 116 | 111 | -5 | 39 | 41 | 394 ^a | 381 | -13 |
| 134884 | G-112 | 12/20/48 | 1 | 43.5 | 42.4 | -1.1 | 15.1 | 14.2 | -0.9 | 103 | 102 | -1 | 39 | 35 | 389 ^a | 376 | -13 |
| 134885 | G-113 | 12/21/48 | 1 | 42.4 | 42.8 | +0.4 | 14.9 | 14.5 | -0.4 | 105 | 105 | 0 | 34 | 35 | 372 ^a | 367 | -5 |
| Current Mill Average: | | | | 43.1 | 42.6 | -0.5 | 14.9 | 14.3 | -0.6 | 108 | 104 | -4 | 37 | 37 | 377 | 362 | -15 |

TABLE XXIV

| Mill H--42-lb. Linerboard | | | | | | | | | | | | | | | | | |
|---------------------------|------|----------|---|------|------|------|------|------|------|-----|-----|----|----|----|------------------|-----|-----|
| 134690 | H-91 | 11/29/48 | 2 | 43.8 | 43.3 | -0.5 | 15.1 | 15.2 | +0.1 | 105 | 102 | -3 | 39 | 39 | 407 ^a | 404 | -3 |
| 134691 | H-92 | 11/30/48 | 2 | 42.3 | 43.5 | +1.2 | 15.2 | 15.1 | -0.1 | 106 | 104 | -2 | 36 | 38 | 393 ^a | 388 | -5 |
| 134799 | H-93 | 12/ 6/48 | 2 | 43.5 | 43.5 | 0.0 | 15.3 | 15.1 | -0.2 | 103 | 105 | +2 | 38 | 39 | 407 | 388 | -19 |
| 134800 | H-94 | 12/ 7/48 | 2 | 42.4 | 43.0 | +0.6 | 15.3 | 15.0 | -0.3 | 104 | 107 | +3 | 35 | 39 | 388 ^a | 375 | -13 |
| 134840 | H-95 | 12/13/48 | 2 | 42.0 | 42.4 | +0.4 | 15.2 | 15.1 | -0.1 | 104 | 103 | -1 | 37 | 38 | 395 ^a | 377 | -18 |
| 134841 | H-96 | 12/13/48 | 2 | 42.9 | 43.4 | +0.5 | 14.7 | 14.6 | -0.1 | 104 | 109 | +5 | 34 | 38 | 361 | 355 | -6 |
| 134898 | H-97 | 12/20/48 | 2 | 42.2 | 42.3 | +0.1 | 15.7 | 15.1 | -0.6 | 102 | 105 | +3 | 36 | 37 | 403 ^a | 382 | -21 |
| 134949 | H-98 | 12/21/48 | 2 | 43.2 | 43.5 | +0.3 | 14.8 | 14.4 | -0.4 | 107 | 107 | 0 | 37 | 38 | 373 | 362 | -10 |
| Current Mill Average: | | | | 42.8 | 43.1 | +0.3 | 15.2 | 15.0 | -0.2 | 104 | 105 | +1 | 37 | 38 | 391 | 379 | -12 |

^a This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

^b This date appeared on the sample; the mill data sheet gives the date of manufacture as December 12, 1948.

Note: All "current mill average" data are calculated from the totals of the individual readings.

TABLE XXV
SUMMARY OF INDIVIDUAL TEST LOTS--DECEMBER 1 THROUGH DECEMBER 31, 1948--continued
Institute Data versus Mill Data

| Basis Weight, lb. | Caliper, points | | JUMBO Mullen Burst, points | | G. E. Puncture, units | | Elmendorf Tear, g./sheet | | | | | | | | |
|---------------------------|--------------------|------------|----------------------------------|------------|-----------------------------|------------|-----------------------------|------------|----|------------------|--------------------------|-----|------------------|-----|------|
| | IPC | Mill Diff. | IPC | Mill Diff. | IPC | Mill Diff. | IPC | Mill Diff. | In | g./sheet | Across IPC Mill Diff. | | | | |
| | | | | | | | | | | | | | | | |
| Mill I--42-lb. Linerboard | | | | | | | | | | | | | | | |
| 44.2 | 43.2 | -1.0 | 15.6 | 15.6 | 0.0 | 104 | 98 | -5 | 38 | 366 ^a | 442 | +76 | 444 ^a | 512 | +68 |
| 45.4 | 45.0 | -0.4 | 13.8 | 14.1 | +0.3 | 113 | 109 | -4 | 40 | 387 | 465 | +78 | 459 ^a | 556 | +97 |
| 43.9 | 43.5 | -0.4 | 15.0 | 15.3 | +0.3 | 105 | 103 | -2 | 37 | 381 ^a | 433 | +52 | 431 ^a | 510 | +79 |
| 44.3 | 44.0 ^c | -0.3 | 16.2 | 16.4 | +0.2 | 100 | 96 | -4 | 37 | 373 ^a | 455 | +82 | 431 ^a | 542 | +111 |
| 44.0 | 43.9 | -0.1 | 14.9 | 15.0 | +0.1 | 104 | 102 | -2 | 39 | 367 ^a | 441 | +74 | 439 ^a | 528 | +89 |
| 44.4 | 43.3 | -1.1 | 14.6 | 14.4 | -0.2 | 103 | 101 | -2 | 36 | 359 ^a | 443 | +84 | 423 ^a | 525 | +102 |
| 45.8 | 44.6 | -1.2 | 13.9 | 13.8 | -0.1 | 110 | 104 | -6 | 38 | 372 ^a | 434 | +62 | 431 ^a | 528 | +97 |
| 44.6 | 43.9 | -0.7 | 14.9 | 14.9 | 0.0 | 105 | 102 | -3 | 38 | 372 | 445 | +73 | 437 | 529 | +92 |

TABLE XXVI

| Mill J--42-lb. Linerboard | | | | | | | | | | | |
|---------------------------|------|------|------|------|------|----|------------------|-----|------------------|-----|-----|
| 42.8 | 42.7 | -0.1 | 14.8 | 14.9 | +0.1 | 33 | 336 ^a | 349 | 375 ^a | 399 | +24 |
| 43.0 | 42.6 | -0.4 | 14.3 | 14.8 | +0.5 | 31 | 348 ^a | 338 | 360 ^a | 376 | +16 |
| 42.6 | 42.8 | +0.2 | 14.6 | 14.9 | +0.3 | 32 | 333 ^a | 356 | 397 ^a | 413 | +16 |
| 42.0 | 42.0 | 0.0 | 14.4 | 14.5 | +0.1 | 29 | 298 | 338 | 357 ^a | 401 | +44 |
| 43.2 | 42.8 | -0.4 | 14.1 | 14.3 | +0.2 | 33 | 334 ^a | 345 | 375 ^a | 405 | +30 |
| 43.6 | 42.9 | -0.7 | 14.8 | 15.0 | +0.2 | 34 | 358 ^a | 347 | 379 ^a | 407 | +28 |
| 43.6 | 42.9 | -0.7 | 15.3 | 15.1 | -0.2 | 34 | 349 | 353 | 393 ^a | 381 | -12 |
| 43.9 | 43.1 | -0.8 | 14.7 | 14.8 | +0.1 | 33 | 355 | 311 | 406 ^a | 383 | -23 |
| 43.1 | 42.7 | -0.4 | 14.6 | 14.8 | +0.2 | 32 | 339 | 342 | 380 | 396 | +16 |

ings for one or more specimens which tore beyond the 3/8-inch limit.
are no identification. As well as was possible, the identification was deduced
/or receipt. The manufacturing date and machine number were taken from the mill

ags instead of 24.

30" data are calculated from the totals of the individual readings.

TABLE XXV

SUMMARY OF INDIVIDUAL TEST LOTS--DECEMBER 1 THROUGH DECEMBER 31, 1948--continued
Institute Data versus Mill Data

| File No. | Mill Code | Date Made | Mch. No. | Basis Weight, lb. | | Caliper, points | | JUMBO Mullen Burst, points | | G. E. Puncture, units | | Elmendorf g./sheet In | | | | |
|----------------------------------|------------------|-----------|----------|-------------------|-------------------|-----------------|-------|----------------------------|-------|-----------------------|-------|-----------------------|------|------------------|-----|-----|
| | | | | IPC | Mill | IPC | Mill | IPC | Mill | IPC | Mill | IPC | Mill | | | |
| | | | | Diff. | Diff. | Diff. | Diff. | Diff. | Diff. | Diff. | Diff. | | | | | |
| <u>Mill I--42-lb. Linerboard</u> | | | | | | | | | | | | | | | | |
| 134753 | I-2 ^b | 12/ 3/48 | 1 | 44.2 | 43.2 | -1.0 | 15.6 | 15.6 | 0.0 | 104 | 98 | -5 | 38 | 366 ^a | 442 | +76 |
| 134790 | I-3 ^b | 12/ 6/48 | 1 | 45.4 | 45.0 | -0.4 | 13.8 | 14.1 | +0.3 | 113 | 109 | -4 | 40 | 387 | 465 | +78 |
| 134791 | I-4 ^b | 12/ 8/48 | 1 | 43.9 | 43.5 | -0.4 | 15.0 | 15.3 | +0.3 | 105 | 103 | -2 | 37 | 381 ^a | 433 | +52 |
| 134843 | I-5 ^b | 12/13/48 | - | 44.3 | 44.0 ^c | -0.3 | 16.2 | 16.4 | +0.2 | 100 | 96 | -4 | 37 | 373 ^a | 455 | +82 |
| 134848 | I-6 ^b | 12/16/48 | 1 | 44.0 | 43.9 | -0.1 | 14.9 | 15.0 | +0.1 | 104 | 102 | -2 | 39 | 367 ^a | 441 | +74 |
| 134896 | I-7 | 12/20/48 | 1 | 44.4 | 43.3 | -1.1 | 14.6 | 14.4 | -0.2 | 103 | 101 | -2 | 36 | 359 ^a | 443 | +84 |
| 134912 | I-8 | 12/22/48 | 1 | 45.8 | 44.6 | -1.2 | 13.9 | 13.8 | -0.1 | 110 | 104 | -6 | 38 | 372 ^a | 434 | +62 |
| Current Mill Average: | | | | 44.6 | 43.9 | -0.7 | 14.9 | 14.9 | 0.0 | 105 | 102 | -3 | 38 | 372 | 445 | +73 |

TABLE XXVI

| | | | | | | | | | | | | | | | |
|---------------------------|-------|----------|---|------|------|------|------|------|------|-----|-----|----|----|------------------|---------|
| Mill J--42-lb. Linerboard | | | | | | | | | | | | | | | |
| 134712 | J-95 | 12/ 3/48 | 1 | 42.8 | 42.7 | -0.1 | 14.8 | 14.9 | +0.1 | 112 | 109 | -3 | 33 | 336 ^a | 349 +13 |
| 134713 | J-96 | 12/ 3/48 | 1 | 43.0 | 42.6 | -0.4 | 14.3 | 14.8 | +0.5 | 113 | 106 | -7 | 31 | 348 ^a | 338 -10 |
| 134801 | J-97 | 12/ 7/48 | 1 | 42.6 | 42.8 | +0.2 | 14.6 | 14.9 | +0.3 | 108 | 108 | 0 | 32 | 333 ^a | 356 +23 |
| 134802 | J-98 | 12/10/48 | 1 | 42.0 | 42.0 | 0.0 | 14.4 | 14.5 | +0.1 | 103 | 103 | 0 | 29 | 298 | 338 +40 |
| 134852 | J-99 | 12/17/48 | 1 | 43.2 | 42.8 | -0.4 | 14.1 | 14.3 | +0.2 | 105 | 106 | +1 | 33 | 334 ^a | 345 +11 |
| 134853 | J-100 | 12/17/48 | 1 | 43.6 | 42.9 | -0.7 | 14.8 | 15.0 | +0.2 | 101 | 104 | +3 | 34 | 358 ^a | 347 -11 |
| 134899 | J-101 | 12/21/48 | 1 | 43.6 | 42.9 | -0.7 | 15.3 | 15.1 | -0.2 | 94 | 94 | 0 | 34 | 349 | 353 +4 |
| 134900 | J-102 | 12/21/48 | 1 | 43.9 | 43.1 | -0.8 | 14.7 | 14.8 | +0.1 | 99 | 98 | -1 | 33 | 355 | 311 -44 |
| Current Mill Average: | | | | 43.1 | 42.7 | -0.4 | 14.6 | 14.8 | +0.2 | 104 | 104 | 0 | 32 | 339 | 342 +3 |

^a This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

^b When received, this sample bore no identification. As well as was possible, the identification was deduced from the date of mailing and/or receipt. The manufacturing date and machine number were taken from the mill data sheet.

^c The average of only 23 readings instead of 24.

Note: All "current mill average" data are calculated from the totals of the individual readings.

TABLE XXVII

SUMMARY OF INDIVIDUAL TEST LOTS--DECEMBER 1 THROUGH DECEMBER 31, 1948--continued

| Institute Data versus Mill Data | | | | | | | | | | | | | | | | | |
|---|--------------------|------|------------|-------------------------|----------------|--------------------|----------------|-----|------------|-----|------------|------------------|----------|-----------------|------------------|------------|--------|
| Basis Weight, lb. | Caliper; points | IPC | Mill Diff. | JUMBO | | G. E. | | IPC | Mill Diff. | IPC | Mill Diff. | In | g./sheet | Elmendorf Tear, | IPC | Mill Diff. | Across |
| | | | | Mullen Burst, points | IPC Mill Diff. | Puncture, units | IPC Mill Diff. | | | | | | | | | | |
| <u>Mill E-44/46-lb. Drum Linerboard</u> | | | | | | | | | | | | | | | | | |
| 7.4 | 47.1 | -0.3 | 13.4 | 13.1 | -0.3 | 89 | 93 | +4 | 42 | 38 | -4 | 463 ^a | 445 | -18 | 425 ^a | 454 | +29 |
| 5.3 | 46.0 | -0.3 | 13.1 | 13.0 | -0.1 | 113 | 106 | -7 | 41 | 38 | -3 | 437 ^a | 372 | -65 | 461 ^a | 432 | -29 |
| 3.1 | 46.5 | -1.6 | 13.5 | 13.1 | -0.4 | 103 | 98 | -5 | 44 | 42 | -2 | 448 | 409 | -39 | 462 ^a | 426 | -36 |
| 7.3 | 46.5 | -0.8 | 13.3 | 13.1 | -0.2 | 102 | 99 | -3 | 42 | 39 | -3 | 450 | 409 | -41 | 450 | 437 | -13 |

ings for one or more specimens which tore beyond the 3/8-inch limit.

" data are calculated from the totals of the individual readings.

TABLE XXVII

SUMMARY OF INDIVIDUAL TEST LOTS--DECEMBER 1 THROUGH DECEMBER 31, 1948--continued

Institute Data versus Mill Data

| File No. | Mill Code | Date Made | Mch. No. | Basis Weight, lb. | | Caliper, points | | JUMBO Mullen Burst, points | | G. E. Puncture, units | | In Elmendorf g./sheet |
|----------------------------------|-----------|-----------|----------|-------------------|------------|-----------------|------------|----------------------------|------------|-----------------------|------------|--------------------------|
| | | | | IPC | Mill Diff. | IPC | Mill Diff. | IPC | Mill Diff. | IPC | Mill Diff. | |
| Mill E-44/46-lb. Drum Linerboard | | | | | | | | | | | | |
| 134710 | E-49 | 12/ 2/48 | 1 | 47.4 | -0.3 | 13.4 | 13.1 | 89 | 93 | 42 | 38 | 463 ^a 445 -18 |
| 134897 | E-52 | 12/21/48 | 1 | 46.3 | -0.3 | 13.1 | 13.0 | 113 | 106 | 41 | 38 | 437 ^a 372 -65 |
| 134950 | E-53 | 12/27/48 | 1 | 48.1 | -1.6 | 13.5 | 13.1 | 103 | 98 | 44 | 42 | 448 409 -39 |
| Current Mill Average: | | | | 47.3 | -0.8 | 13.3 | 13.1 | 102 | 99 | 42 | 39 | 450 409 -41 |

^a This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

